FILE NO. 120-200001

TOSHIBA

SERVICE MANUAL

VIDEO CASSETTE RECORDER

V-730EF, V-610EF, V-510EF
V-430EF, V-230EF, V-220EF
V-730UK, V-720UK, V-710UK
V-430UK, V-230UK, V-220UK,
V-210UK
V-740EG, V-730EG, V-430EG
V-230EG, V-210EG
V-720W, V-710W, V-420W
V-410W, V-220W, V-210W

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1. Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.

2. When reinstalling the chassis and its assemblies, be sure to restore all pretective devices, including : control knobs and compartment covers.

3. Make sure that there are no cabinet openings through which people--particularly children --might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

   If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (See Fig. 1-1) :
   Warning : Do not use an isolation transformer during this test. Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances*), and Underwriters Laboratories (*UL Publication UL1410, 59.7*).

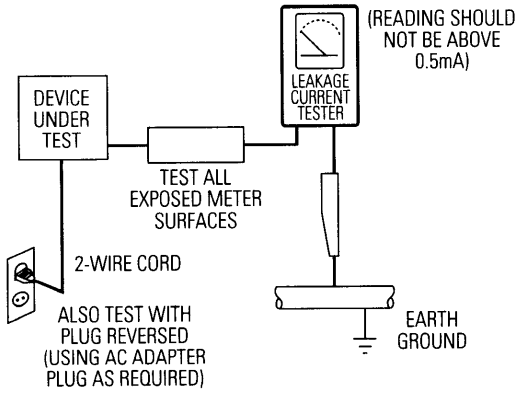

(READING SHOULD NOT BE ABOVE 0.5mA)
LEAKAGE CURRENT TESTER
DEVICE UNDER TEST
TEST ALL EXPOSED METER SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

Fig. 1-1 AC Leakage Test

5. With the unit completely reassembled, plug the AC line cord directly the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known erath ground (metal water pipe, conduit, etc.) and all exposed metal parts, including : antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

6. Antenna Cold Check :
   With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong.
   Connect the other lead to the coaxial connector.

7. Some semiconductor ("solid state") devices are easily damaged by static electricity.
   Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.

8. Immediately before handling sny semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging Wrist-strap device. (Be sure to remove it prior to applying power--this is an electric shock precaution.)

9. Design Alteration Warning :
   Never alter or add to the mechanical or electrical design of this unit. Example : Do not add auxiliary audio or video connectors.
   Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.

10. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

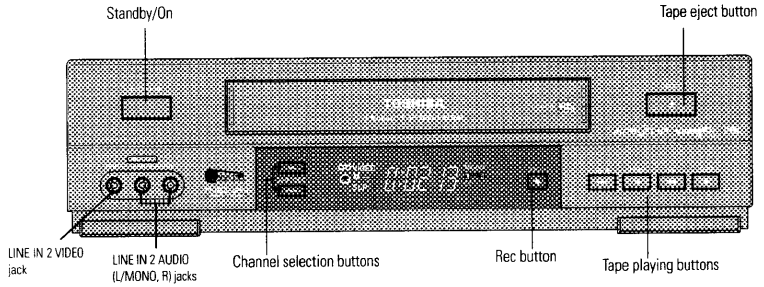
11. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

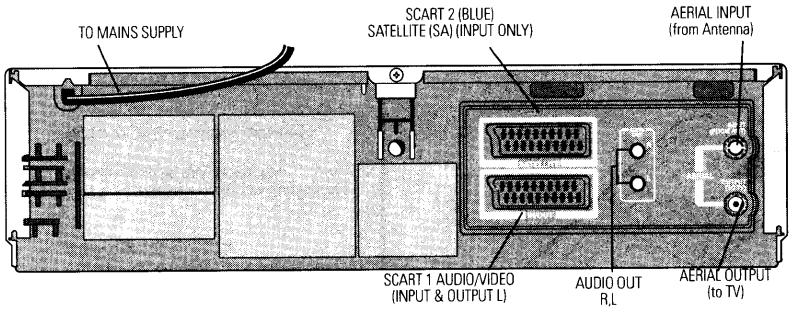
12. Observe the original lead dress, especially near the following areas : Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.

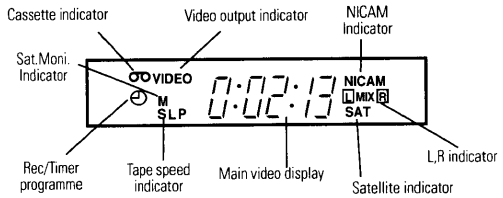
13. Product Safety Notice :
    Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original--even if the replacement is rated for higher voltage, wattage, etc.

    Components that are critical for safety are indicated in the circuit diagram by shading, (⚠ or ⚠).
    Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

General Identification of the VTR Controls

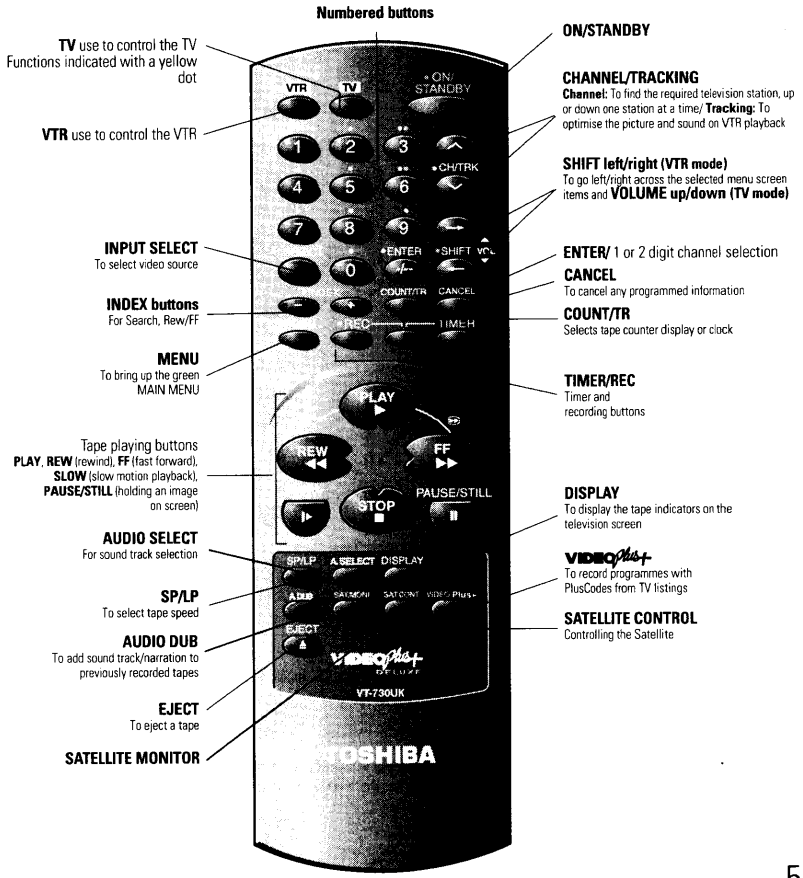



TO MAINS SUPPLY
SCART 2 (BLUE) SATELLITE (SA) (INPUT ONLY)
AERIAL INPUT (from Antenna)
SCART 1 AUDIO/VIDEO (INPUT & OUTPUT L)
AUDIO OUT R,L
AERIAL OUTPUT (to TV)



Your Remote Control

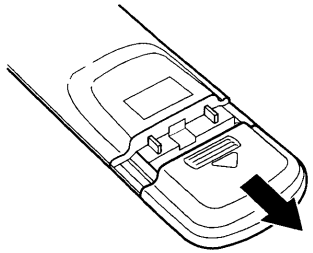
The illustration below is to show a quick guide to the Remote Control. Detailed instructions occur throughout the book.


Numbered buttons
TV use to control the TV Functions indicated with a yellow dot
VTR use to control the VTR
INPUT SELECT
To select video source
INDEX buttons
For Search, Rew/FF
MENU
To bring up the green MAIN MENU
Tape playing buttons
PLAY, REW (rewind), FF (fast forward), SLOW (slow motion playback), PAUSE/STILL (holding an image on screen)
AUDIO SELECT
For sound track selection
SP/LP
To select tape speed
AUDIO DUB
To add sound track/narration to previously recorded tapes
EJECT
To eject a tape
SATELLITE MONITOR
ON/STANDBY
CHANNEL/TRACKING
Channel: To find the required television station, up or down one station at a time/ Tracking: To optimise the picture and sound on VTR playback
SHIFT left/right (VTR mode)
To go left/right across the selected menu screen items and VOLUME up/down (TV mode)
ENTER/ 1 or 2 digit channel selection
CANCEL
To cancel any programmed information
COUNT/TR
Selects tape counter display or clock
TIMER/REC
Timer and recording buttons
DISPLAY
To display the tape indicators on the television screen
To record programmes with PlusCodes from TV listings
SATELLITE CONTROL
Controlling the Satellite
VT-730UK

Preparing your Remote Control

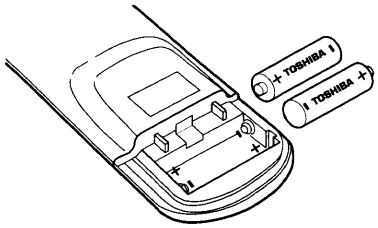
The Remote Control handset is needed to operate your new Toshiba video recorder. If used correctly, it should give years of trouble-free viewing. Please take good care of it, always observing the correct polarities when replacing the batteries.

Carefully open the battery compartment on the rear of the Remote Control by sliding in the direction of the arrow.



Insert both batteries taking care to observe the correct polarity (+ and –).

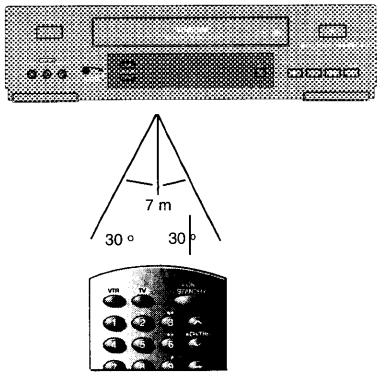
The 2 Toshiba batteries supplied are Cadmium- and Mercury-free (UM-4, AAA, IECR03, 1.5v).



Replace the cover of the battery compartment.

CAUTION:
DO NOT throw your batteries into a fire. Dispose of your batteries in a designated disposal area.
DO NOT mix an old battery with a new one.
DO NOT mix battery types.

For optimum performance your Remote Control will operate within a distance of 7 metres and up to 30° from the central position.



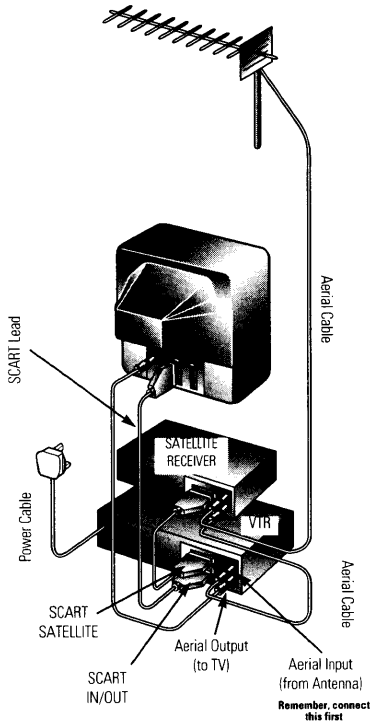
If the Remote Control does not work, press the VTR button and make sure the batteries are in good working order.

Connecting the Leads and Auto Set Up

When *first* connected to the mains electricity supply the VTR will automatically search and store TV stations in memory and also set the clock. But remember, you *must* connect the Aerial ***before*** connecting the VTR to the power supply.

Satellite users: Refer to section *SATELLITE CONTROL* starting on page 26.

REMEMBER:
DO NOT PLUG THE VTR INTO THE MAINS UNTIL *AFTER* YOU HAVE CONNECTED THE AERIAL CABLE AS SHOWN.



NOTE: WHERE POSSIBLE, ALWAYS CONNECT USING A SCART LEAD FOR IMPROVED SOUND AND PICTURE QUALITY.

1 Connect the Aerial Cable to the VTR (Aerial Input).

2 Connect another Aerial Cable from the VTR (Aerial Output) to the TV.

3 Connect a SCART Lead from the VTR to the TV as shown. Connecting via a SCART Lead will give better picture and sound quality. It will also enable the television to automatically switch over whenever a tape is played.

4 Connect the VTR to the power supply with the Power Cable.
The display on the VTR will flash 'AUTO' for about 2-4 minutes.

5 Now turn on the television.

If you have connected with a SCART Lead you will see various television stations appear and disappear on your television.

Now turn the page to continue the Auto Set Up...

If you get any problems contact the helpline...

Auto Set Up continued

After connecting the Leads as on *page 7* and Auto Set Up has run, *one* of the following screens will be displayed. **If not, select the AV channel on the television manually**. If you have not connected the VTR using a SCART Lead select the channel on the TV that you normally watch videos on and tune this channel until you find one of these screens. Store this channel and select it every time you watch a video.

Tuning into All Channels Found

For full details of tuning your TV, please refer to your TV Owner's Manual.

1 This screen will be displayed if **All Channels Found**. The numbers in the right hand column may be different.

Auto Set Up is now complete.

Press the MENU button twice on the Remote Control to automatically set the clock.

Go to *page 9, Checking the Auto Set Up.*

AUTO SET UP

	CH P.	CH
BBC1	1 :	22
BBC2	2 :	28
ITV	3 :	25
CH4	4 :	32
C5	5 :	30

Auto Set Up Now Completed
Press MENU to Exit And Automatically Set Clock

Tuning in - Some Channels Found

Channel 5 is only available in some areas of the country (and the reception may be poor). If Channel 5 is not stored in position 5 check to see if it is stored in 7 or above and use the Channel Swapping *function as detailed on* Page 10. *If Channel 5 has not been stored and all other channels have been, it is likely that channel 5 is not available in your area.*

2 This screen will be displayed if **Some Channels Found.**

The VTR has been unable to find the channels identified by the white flashing squares. They may be stored in positions 7 and above.

Press the MENU button and refer to *Channel Swapping on page 10.*

AUTO SET UP

	CH P.	CH
BBC1	1 :	22
BBC2	2 :	--
ITV	3 :	25
CH4	4 :	32
C5	5 :	--

Stations not identified
Check CH P.7 and above by pressing MENU

Tuning in - No Channels Found

If no channels are found the clock will not set automatically.

Press the MENU button and select CLOCK SET from the green MAIN MENU screen.

Using the number buttons on the Remote Control set the clock.

For single numbers press 0 first.
E.g. for April, which is 4, press 0 4.

Once the Date and Time have been set press the MENU button to exit.

3 This screen will be displayed if **No Channels Found.**

The VTR has been unable to find any channels.
Check that the Aerial is connected correctly and press the number button 0 on the Remote Control.

If no channels are found a second time, *see page 12, Manual Tuning.*

AUTO SET UP

	CH P.	CH
BBC1	1 :	--
BBC2	2 :	--
ITV	3 :	--
CH4	4 :	--
C5	5 :	--

Check aerial is connected and press 0 to try again

AUTO SET UP

	CH P.	CH
BBC1	1 :	22
BBC2	2 :	--
ITV	3 :	25
CH4	4 :	32
C5	5 :	--

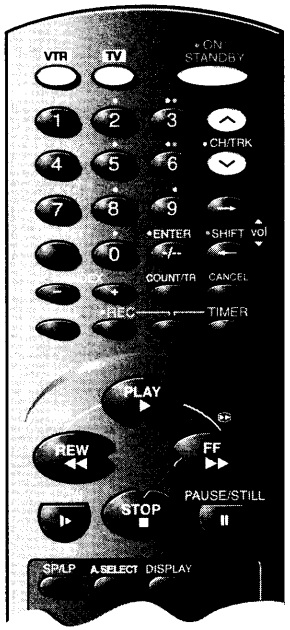
Still not working
Use manual tuning.
Press MENU to exit

...If you get any problems contact the helpline

Checking the Auto Set Up

It is important that you check Auto Set Up has stored the channels in the correct order on the VTR for the operation of VIDEOPlus+

Checking the Auto Set Up

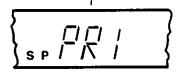


1 Turn on the TV and select the channel on which you watch videos.

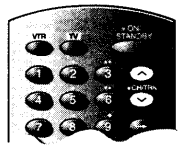
2 Now turn on the VTR.

3 Using the **CH/TRK** P Q buttons on the Remote Control, check that the order of the TV stations (the programme position number) stored on the VTR is as follows:

Programme position number



The programme position number will change as you press the **CH/TRK** P Q buttons.



Program Position	TV Station
1	BBC1
2	BBC2
3	ITV
4	Channel 4
5	Channel 5*
6	Satellite

(if you use a different order VIDEOPlus+ will not work)

Any other stations will be stored in program positions 7, 8, etc.

**Channel 5 is only available in some areas of the country (and the reception may be poor). If Channel 5 is not stored in position 5 check to see if it is stored in 7 or above and use the* Channel Swapping *function as detailed on* Page 10. *If Channel 5 has not been stored and all other channels have been it is likely that channel 5 is not available in your area.*

Note: *Regional variations* – from some areas of the country you may be able to receive broadcasts from more than one region.

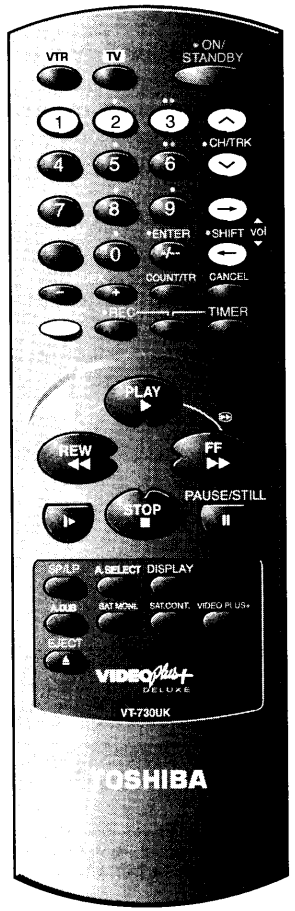
If your preferred regional broadcast is stored in position 7 or above please use the *Channel Swapping* facility as described on *page 10.*

THE SET UP IS NOW COMPLETE

You are now ready to PLAYBACK TAPES and MAKE RECORDINGS.
Refer to the *BASIC OPERATION* section which starts on *page 14.*

Channel Swapping

You only need to use this section if the VTR did not tune in all of the stations in Auto Set Up or if you want to select a different regional Broadcast on a channel position.



1 Press the MENU button on the Remote Control to select the green MAIN MENU.

MAIN MENU
1 TIMER PROGRAMMING
2 USER SETTING
3 INSTALLATION
4 CLOCK SET
5 nexTViewLink SETTING
Press 1 - 5 to select
Press MENU to exit

2 Press button 3 to select the blue INSTALLATION MENU.

INSTALLATION MENU
1 AUTO SET UP
2 MANUAL SET UP
3 SATELLITE SETTING
SAT. CONNECTION (I P.)
SAT. BRAND NO. (17)
4 VIDEO PLUS+ GUIDE CH
Press 1 - 4 to select
Press MENU to exit

3 Press button 2 to select the blue MANUAL SET UP screen.

MANUAL SET UP
1 CH SWAPPING
2 MANUAL TUNING
3 RF OUT CHANNEL (21)
Press 1 - 3 to select
Press MENU to exit

4 Press button 1 to select CH SWAPPING. The Channel Swapping screen will appear superimposed over the TV picture.

5 Press the **CH/TRK** ∧ or ∨ button on the Remote Control to find the station required (CH P.). The picture on the TV will change as you move up and down the channels.

6 *E.g. If you were to find Channel 5 stored in position 7:* Select the new channel position (NEW CH P.) using the number buttons on the Remote Control, *e.g.* for *5* press number buttons 0 and 5.

CH SWAPPING
CH P. 7 NEW CH P. 5
CH P. ∨/∧ to find station
Select NEW CH P. press 0 - 9
Press SHIFT to swap
Press MENU to exit

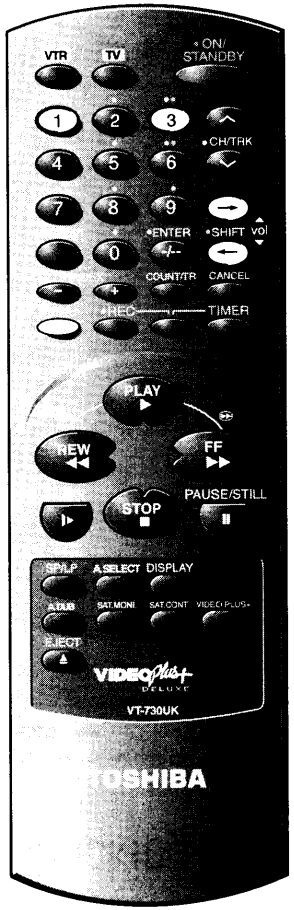
7 Press **SHIFT** ➔ to swap the channels.
The station now displayed has been saved in the channel position indicated on screen.

8 Continue for all the other channels to be swapped. When all the missing stations have been found press the MENU button to exit and *see page 9, Checking the Auto Set Up.*

Restarting Auto Set Up

If you ever need to re-run the Auto Set Up process, for example, if you move house, carry out the connections as detailed on *page 7* and re-start as described here.

If the Auto Set Up does not work check the Aerial connection to the VTR and from the VTR to the TV.



1 Press the MENU button on the Remote Control to display the green MAIN MENU on the screen.

MAIN MENU
1 TIMER PROGRAMMING
2 USER SETTING
3 INSTALLATION
4 CLOCK SET
5 nexTViewLink SETTING
Press 1 - 5 to select
Press MENU to exit

2 Press button 3 to select the blue INSTALLATION MENU.

INSTALLATION MENU
1 AUTO SET UP
2 MANUAL SET UP
3 SATELLITE SETTING
SAT. CONNECTION (I P.)
SAT. BRAND NO. (17)
4 VIDEO PLUS+ GUIDE CH
Press 1 - 4 to select
Press MENU to exit

3 Press button 1 to select AUTO SET UP.

The AUTO SET UP screen comes up.

AUTO SET UP

	CH P.	CH
BBC1	1 :	22
BBC2	2 :	28
ITV	3 :	25
CH4	4 :	32
C5	5 :	30

Press SHIFT to search
Press MENU to exit

4 Press **SHIFT** ➔ to start AUTO SET UP.

5 Refer to *page 8* and follow the relevant steps for the screen displayed, depending upon the result.

...If you get any problems contact the helpline

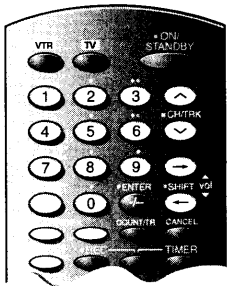
Manual Tuning and Cable TV Installation

Manual Tuning is available as a back-up if Auto Set Up does not work due to poor Broadcast Reception. When using Manual Tuning you will need to use the information on both of the TV screen and the VTR front display panel.

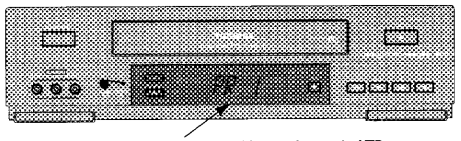
Manual Tuning of Terrestrial Stations

Note: Some Cable systems send all their TV and Satellite programmes on one channel only.
If you have this type of system you should tune in one Position number on the video and then use the Cable Box to select the chosen channel to record.

BBC1:	Position number **1**
BBC2:	Position number **2**
ITV:	Position number **3**
CHANNEL 4:	Position number **4**
CHANNEL 5:	Position number **5**
Satellite/Cable:	Position number **6**



Note: The VTR must display a position *number* before tuning in can start. Remove any tape and if L1, L2 or SA is displayed press the INPUT SELECT button on the Remote Control so that a position number *is* displayed.



PR. = Programme Position number on the VTR

1 Press the MENU button on the Remote Control to display the green MAIN MENU.

2 Press number button 3 to select the blue INSTALLATION screen.

3 Press number button 2 to select the blue MANUAL SET UP screen and then 2 again for MANUAL TUNING.
Press the **SHIFT** ► or ◄ to highlight the program position you wish to tune, then press the **CH/TRK** ∧ ∨ repeatedly until you find the channel you wish to store. The TV will display the programme as you search.

4 When the correct TV signal is showing repeat step **3** for the other TV stations and for the Satellite stations if your Satellite receiver is not connected by a SCART Lead.

5 Press the MENU button on the Remote Control to exit. Channel Tuning is now complete and you can select a television programme by the position number on which the TV station is stored.

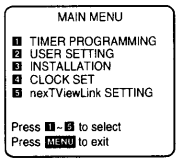
The 'Range' option has no function in the UK.

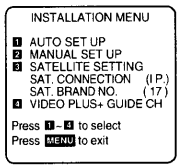
Additional RF Tuning Information

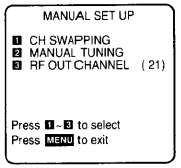
In some areas of the country you may experience interference from other broadcast stations or from other AV equipment. This may be reduced or eliminated by choosing to turn OFF the RF output from your VTR.

Additional RF Tuning Information

If a SCART Lead has been used as detailed in the GETTING STARTED section and you are experiencing problems with interference from other equipment or channels, you can turn OFF the RF output:







1 Press the MENU button on the Remote Control to display the green MAIN MENU.

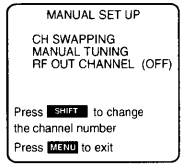
2 Press number button 3 to select the blue INSTALLATION MENU.

3 Press button 2 to select MANUAL SET UP.

4 Press button 3 to select RF OUT CHANNEL.

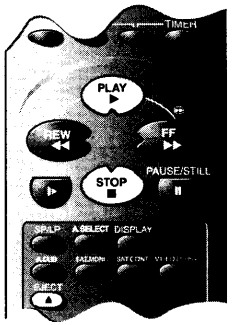
5 Press **SHIFT** ► or ◄ until OFF appears in the RF OUT CHANNEL option.

6 Press MENU to exit.
If you still believe you are having interference problems, consult your dealer or ring the Toshiba Helpline.



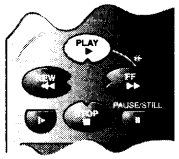
Watching a Pre-Recorded Tape

If you insert a commercially pre-recorded tape, it will automatically start to play. If you have not used a SCART Lead you will first need to select the channel on the television that you watch videos on (refer to Additional RF Tuning Information on page 13). The VTR is fitted with an autohead cleaner which automatically cleans the video heads during playback.

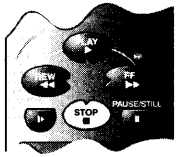


1 Insert a tape with the clear window facing upwards. The 'video cassette loaded' z symbol will appear on the VTR front display.

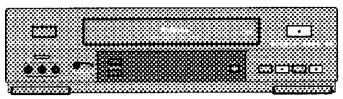
2 To play the tape, press the PLAY button on the Remote Control.



3 To stop the tape press the STOP button on the Remote Control.

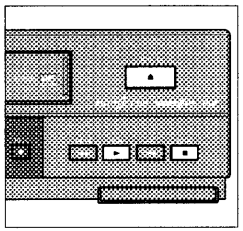


4 To eject a tape press the EJECT button on the Remote Control.



1 To play the tape, press the PLAY button on the front of the VTR.

2 To stop the tape press the STOP button.



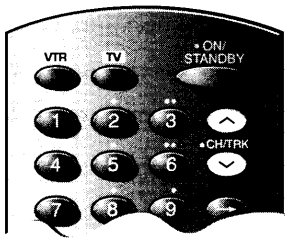
3 To eject the tape press the EJECT button.

Tracking

As each VTR is different, slight adjustments need to be made in the way the tape is read. This is called 'Tracking.'

When playback starts the video recorder automatically adjusts the Tracking to obtain the best possible picture and sound; Digital Auto Tracking. The DT (Digital Tracking) indicator will flash while this adjustment takes place and the playback picture and sound may be distorted. The VTR will automatically adjust the Tracking as best it can.

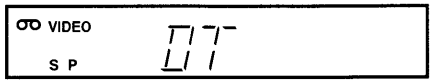
If you playback rented tapes or tapes recorded on other machines, you may occasionally find that the Digital Auto Tracking is not able to improve the picture sufficiently. In these instances you will need to adjust the Tracking manually.



To manually adjust Tracking

1 With a tape in and playing, hold down either the **CH/TRK** ∧ or ∨ button on the Remote Control until the best possible picture and sound is obtained.

2 To resume Automatic Digital Tracking, press the two **CH/TRK** buttons on the Remote Control.



3 If the tape is old or worn, it may be impossible to improve the picture performance.

If you press the PAUSE/STILL button the image may shimmer. This may also be reduced by adjusting the Tracking.

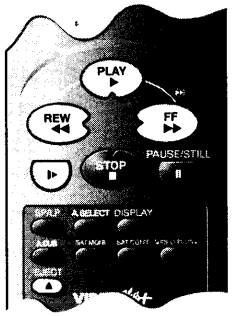
Variable Speed Playback

When viewing a tape it can be played at various speeds. This is called Picture Search.

As well as normal playback, you can view a tape at various speeds.

When watching a tape, you can look for a particular scene by pressing either the FF or REW button or view the tape in slow playback using the SLOW button. In Picture Search, the quality of the image may deteriorate. If you view a tape recorded in Long Play (LP) mode, or recorded on another VTR, the picture quality may be poor or even in black and white.

Improvements can sometimes be made by adjusting the Tracking, *see page 15.*



When in Picture Search or Slow Motion, the quality of the image may deteriorate.

Picture Search enables you to Fast Forward or Rewind and look for a particular part of a tape.

1 Press PLAY, the VTR will enter normal play mode.
While in play, press and release the FF (or REW) button.
The VTR will search at 5 times the normal playback speed.

2 To return to normal playback mode, press the PLAY button.

3 If you press and HOLD down the FF (or REW) button the VTR will search at 9 times the normal speed. Releasing the FF button will return the VTR to search at 5 times the normal speed. To return to normal playback mode, press the PLAY button.

4 While in Picture Search mode, if you press the FF button again, the VTR will enter normal Fast Forward mode.

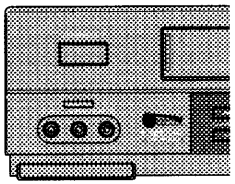
5 Likewise, while in Picture Search REW mode, if you press the REW button again, the VTR will enter normal Rewind mode.

6 If, when Rewinding (REW) or Fast Forwarding (FF), you press the REW (or FF) button, the VTR will enter the Picture Search mode.

7 To view a tape in Slow Motion, when in PLAY, press and release the SLOW button on the Remote Control. The playback will slow down to 1/5th of normal speed.
If you press the SLOW button once again, the playback will slow down to 1/12th of normal speed.

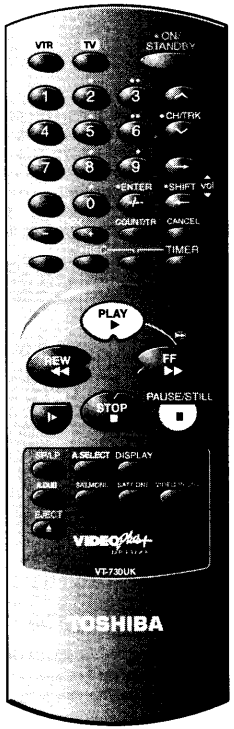
8 Press PLAY to resume normal playback.

1 When in PLAY mode press the FF (Fast Forward) or REW (Rewind) button on the front of the VTR. The VTR will search at 5 times the normal playback speed. If you press and HOLD down the FF (or REW) button the VTR will search at 9 times the normal speed. If you release the button, the VTR will enter normal Fast Forward/ Rewind speed.
To return to normal playback, press PLAY.



Trick Play Functions

Holding images and advancing frames on the screen.



1 When in PLAY, if you want to hold an image on screen, simply press the PAUSE/STILL button.

This will freeze the frame for about 5 minutes.

2 To advance one frame at a time, press and release the PLAY button.

Press and hold the PLAY button.

3 To resume PLAY, press the PAUSE/STILL button again.

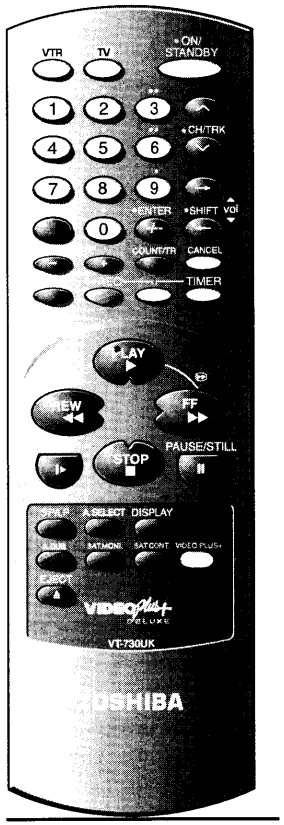
Note : If left unattended for about 5 minutes in the Picture Still mode, the Freeze Frame will cancel and the VTR will revert to PLAY.

Note: Fast moving images may shimmer when Freeze Frame is selected. This can sometimes be reduced by adjusting the Tracking, *see page 15.*

VIDEOPlus+

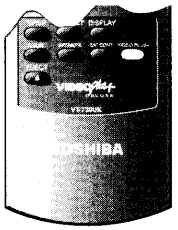
VIDEOPlus+ is the easiest way to record TV programmes, using short numerical codes. The PlusCode programming numbers shown in most TV listings pages, tell the video recorder when to start and stop recording a particular programme. These numbers appear after the programme description.

Videoplus+ and Pluscode are trademarks of GEMSTAR development corp. Videoplus+ system is manufactured under license from GEMSTAR development corporation.



***PDC WARNING PLEASE NOTE:**
If you have selected PDC ON (see page 23) do not change the advertised start time of the programmes or the video will not record.

1 *Before you begin:* Turn on the VTR and the TV.
Ensure the clock is set correctly.
Make sure that the TV stations have been stored correctly on the VTR as in the order shown on *page 12.*



2 Press the VIDEO Plus+ button on the Remote Control.

3 Enter the PlusCode, using the number buttons on the Remote control. *E.g.* to record a TV programme with a PlusCode of *1234*, press *1234*. Check that you have entered the numbers correctly and press the VIDEO Plus+ button to confirm. If you make a mistake, simply press the CANCEL button and re-enter the PlusCode.

PLUSCODE ( )
Enter PLUSCODE and
press VIDEO PLUS+
to confirm
Press CANCEL to cancel
Press MENU to exit

4 You are now prompted to confirm how many times you want to record this event – *i.e.* ONCE, DAILY or WEEKLY, *e.g.* ONCE, Press 1.

PLUSCODE (1234)
Select rec frequency
1 ONCE
2 DAILY (MO - FR)
3 WEEKLY
Press 1 - 3 to select
Press CANCEL to cancel
Press MENU to exit

5 The TV will now confirm the programme information that relates to the PlusCodes entered, along with the recording defaults, *e.g.* PDC ON/OFF* and the tape speed: 1 for SP (Standard Play) or 2 for LP (Long Play).

If you wish to change the speed use SHIFT → and move to SPD, then press 1 for short play or 2 for long play.

CH	DATE	ON	OFF	SPD
1	SA ONCE 18	17:00	- 17:30 PDC	SP
2				
3				
4				
5				
6				

14:39 11.11. '99 TH
Press 1 - 6 to select
Press TIMER to record

6 If you wish to enter another **VIDEOPlus+** recording press the VIDEO Plus+ button again and repeat steps **3** to **4.**

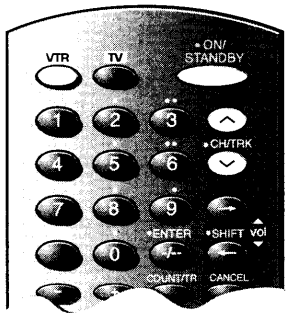
7 If OK, press the two TIMER buttons at the same time. The TIMER indicator on the front panel of the VTR will light up.

To cancel the Timer, press the two Timer buttons again, then the ON/STANDBY button.

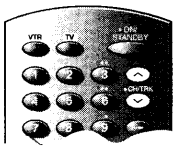
One Touch Record - *Advanced OTR*

Recording the selected video channel at the touch of a button.

One Touch Recording enables you to record what is currently showing and set the off timer for up to 4 hours in advance.



1 Turn on the VTR and select the desired channel number using the **CH/TRK ∧ ∨** buttons on the Remote Control.

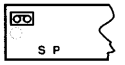


2 Insert a video tape.

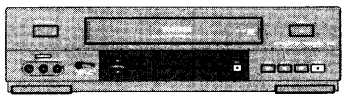
3 To record what is currently showing, simply press the two REC buttons on the Remote Control.

A red dot will be displayed below the 'video cassette loaded' symbol.

This will set the VTR to record until either the STOP button is pressed or the end of the tape is reached.

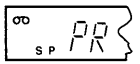


Advanced OTR starts recording simply at the touch of a button.
When using Advanced OTR the VTR will count the time from the hour and 1/2 past the hour. If you press the REC button at 14:15 - the 1st off time shown will be 14:30, pressing the REC button again will set an off time of 15:00.

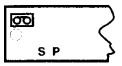


Turn on the TV and select the video channel.

1 Turn on the VTR and select the desired channel number using the channel buttons on the front of the VTR.



2 Insert a video tape. Press the REC button. A red symbol will be displayed below the 'video cassette loaded' symbol on the front of the VTR.



The VTR will continue to record until the STOP button is pressed or the tape runs out.

By repeadtedly pressing the REC button on the VTR you can set the VTR to record for a preset time. The VTR display will show the time that the recording will stop and a red timer symbol will appear.

One more	30 minutes
Twice	60 minutes
Three times	90 minutes
Four times	120 minutes
Five times	150 minutes
Six times	180 minutes
Seven times	210 minutes
Eight times	240 minutes
Nine times	--- Cancel

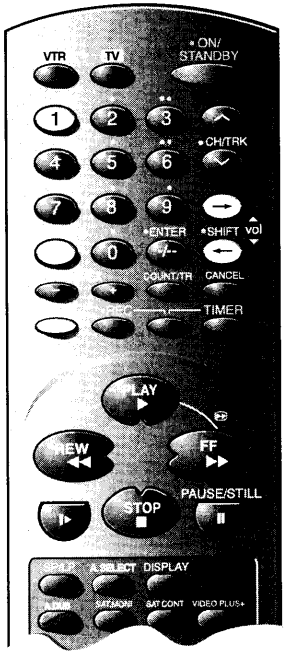
To STOP an OTR, simply press the STOP button. To extend the recording time (*i.e* delay the the stop time) press the REC button on the VTR repeatedly to extend in 30 minute section.
If you wish to skip a scene or adverts, simply press the PAUSE/STILL button. This will pause the recording. To start the recording again, simply press the PAUSE/STILL button again.

NOTE: Advanced OTR only works with the REC button on the front of the VTR.

Using On-Screen Programming

Before recording a television broadcast, the clock, date and year must be correct. By setting the 'ADJUST CLOCK' on, see page 24, the VTR will check and correct the clock each morning at 8am provided the VTR is in Standby.
Note: Use the **SHIFT** ➔ or ➔ buttons on the Remote Control to the move the cursor forwards or backwards. If you make a mistake, simply press the **SHIFT** ➔ button to move back and re-enter the number.

Timer recordings can easily be made using the On-Screen Programming function. Up to 6 timed events can be set for up to one month in advance.



To cancel any programmed information, select TIMER PROGRAMMING from the green MAIN MENU and, with the event number highlighted *e.g. 1*, press the CANCEL button to clear the programmed information.

***PDC WARNING PLEASE NOTE:**
If you have selected PDC *ON* (*see page 23*) do not change the *advertised* start time of the programmes or the video will *not* record.

1 Press the MENU button to display the green MAIN MENU.

2 Press number 1 to select the blue TIMER PROGRAMMING screen.

3 Select the first available event (usually position 1, there are 6) using the numbered buttons on the Remote Control, *e.g. Button 1 for position 1.*

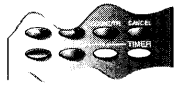
4 Follow the prompts at the bottom of the screen. Select the channel position number *e.g. 01 for Channel 1* using the number buttons. If you want to record from L or SA, press the INPUT SELECT button on the Remote Control (*see page 4* for appropriate Input): L1 = SCART; L2= F/AV.

5 Confirm how many times you want to record this event, *i.e.* ONCE, DAILY, or WEEKLY. Press 1, 2 or 3 accordingly. Confirm the day if appropriate.

6 Set the date you want the recording to take place, *e.g.* 29 for the 29th. The VTR can record up to 1 month in advance. All you need to do is simply put in the date (NOT the month) and the VTR will store the information.

7 Set the recording START time and FINISH time, using the number buttons on the Remote Control. *E.g.* START 1 9 3 0 FINISH 2 0 2 0.
Select Programme Delivery Control (PDC*) ON or OFF: number button 1 for ON, 2 for OFF – *see page 23.*
Select the desired tape speed 1 for SP (Standard Play) or 2 for LP (Long Play). Repeat for all remaining timed recordings that you wish to make.

8 Press BOTH THE TIMER buttons on the Remote Control at the same time. The VTR switches to 'Timer On' mode. If you wish to turn the Timer off for any reason simply press the 2 TIMER buttons again.
Don't forget to put it back in Timer mode, or it will not make a recording.



MAIN MENU
1 TIMER PROGRAMMING
2 USER SETTING
3 INSTALLATION
4 CLOCK SET
5 nexTViewLink SETTING
Press 1 - 5 to select
Press MENU to exit

15:31 22. 6. '00 TH
CH DATE ON OFF SPD
1
2
3
4
5
6
Press 1 - 6 to select
Press MENU to exit

15:31 22. 6. '00 TH
CH DATE ON OFF SPD
1 1 PDC SP

15:31 22. 6. '00 TH
CH DATE ON OFF SPD
1 1 ONCE PDC SP

15:31 22. 6. '00 TH
CH DATE ON OFF SPD
1 1 ONCE 29 19:30 ~ 20:20 PDC SP
2
3
4
5
6
Press 1 - 6 to select
Press TIMER to record

User Settings – Tape Select and Eco Mode

Presetting the video to your chosen recording defaults using the *USER SETTING* screen from the green MAIN MENU.

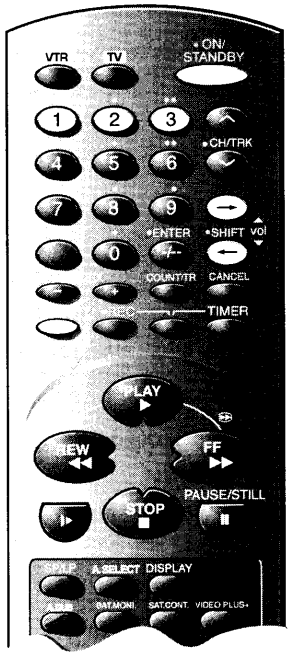
The USER SETTING screen has 2 displays.

By pressing **SHIFT** ➔ whilst on the USER SETTING **1/2** screen you will progress to the USER SETTING **2/2** screen.
Press **SHIFT** ➔ and you will go back to USER SETTING screen **1/2**.

MAIN MENU
1 TIMER PROGRAMMING
2 USER SETTING
3 INSTALLATION
4 CLOCK SET
5 nexTViewLink SETTING
Press 1 - 5 to select
Press MENU to exit

USER SETTING 1/2
1 TAPE SELECT (E180)
2 ECO. MODE (OFF)
3 NTSC ON PAL TV (ON)
4 VIDEO PLUS+ EXTEND (OFF)
5 COLOUR (ON)
Press 1 - 5 to change
Press SHIFT to next
Press MENU to exit

Note: If you suffer a power failure the settings will need to be reset.



Note: Ensure you connect the VTR to the television using a SCART Lead.

If you wish to use the tape counter to display the time remaining on a cassette, you must indicate the type of cassette inserted. Standard Play gives a better quality picture and sound. For the VTR to able to calculate you must first tell it what length of tape is in the VTR.

1 Press the MENU button on the Remote Control to display the green MAIN MENU.

2 Press number button 2 to select the USER SETTING 1/2 screen.

3 Press number button 1 repeatedly to select between (E180), (E240), (E260) and (E300).

USER SETTING 1/2
1 TAPE SELECT (E260)

4 Having selected the length of tape that is in the VTR, press the MENU button twice to exit..

ECO MODE is useful if you already have a clock display e.g. on another Set Top Box, to save energy and for security. Without the clock display, the VTR is more difficult to spot in the dark.

In normal Standby mode the display on the front of the VTR shows clock. When ECO MODE is on this light turns red.

1 Press the MENU button on the Remote Control to display the green MAIN MENU.

2 Press number button 2 to select the USER SETTING 1/2 screen.

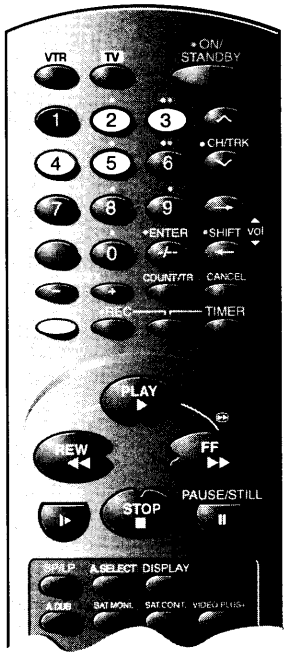
3 Press button 2 to turn ECO MODE ON. Now, when the VTR is in Standby mode the front display panel will shut off.
Even the clock disappears. By pressing the Standby button again on the Remote Control the display panel will reappear.

USER SETTING 1/2
2 ECO MODE (ON)

4 Press MENU to exit.

NTSC on PAL TV, VIDEO Plus+ EXTEND and Colour

Note: If you suffer a power failure the settings will need to be reset.



NTSC is the television standard used in many parts of the world.

See page 25 NTSC Playback.

1 Press the MENU button on the Remote Control to display the green MAIN MENU.

2 Press number button 2 to select the blue USER SETTING screen.

3 Press number button 3 repeatedly to select between ON or OFF.

USER SETTING 1/2
3 NTSC ON PAL TV (ON)

To prevent delays or over-runs the VTR has a function called VIDEO Plus+ EXTEND allowing you to extend the recording time by up to 60 minutes. If PDC is set to ON, this VIDEO Plus+ EXTEND is ignored.

1 As steps 1-2 above and press button 4 repeatedly to set the VIDEO PLUS+ EXTEND time by increments of 10 minutes.

USER SETTING 1/2
4 VIDEO PLUS+ EXTEND (OFF)

2 To turn off, press 4 repeatedly until OFF shows.

To view video tapes in Colour the COLOUR option must be set to ON. However, when viewing black and white tapes you may find that by choosing OFF the picture is improved.

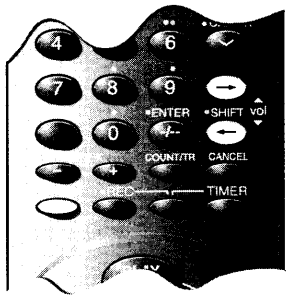
1 Press the MENU button on the Remote Control to display the green MAIN MENU.

2 Press number button 2 to select the blue USER SETTING screen.

3 Press number button 5 to select between ON or OFF.

USER SETTING 1/2
5 COLOUR (ON)

OSD Background and PDC



The Blue Background feature will automatically display a blue screen when a blank tape is played, no broadcast signal is received or there is no signal from the selected source, e.g. camcorder is connected but not switched on.

1 Press the MENU button on the Remote Control to display the green MAIN MENU.

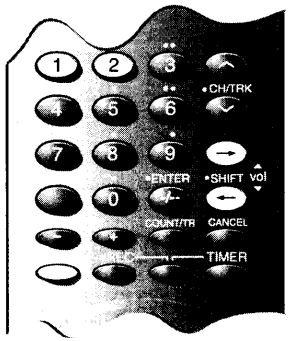
2 Press number button 2 to select the USER SETTING 1/2 screen.

3 Press the **SHIFT** ➔ to go to USER SETTING 2/2 screen. Press the number button 1 to turn OSD BACKGROUND ON.

4 Press MENU twice to exit.

USER SETTING 2/2
1 OSD BACKGROUND (OFF)
2 PDC DEFAULT (OFF)
3 ADJUST CLOCK (ON)
4 16:9
5 (OFF)
NICAM (OFF)
Press 1 - 5 to change
Press SHIFT to previous

PDC only works when the VTR is programmed and in the Timer Mode. If you set the VTR back to Standby before the recording has been made the programme will remain in the VTR's memory. If you fail to set the VTR back to Timer Mode the PDC recording will remain until you cancel/clear the recording; press the MENU button on the Remote Control, choose 1, TIMER PROGRAMMING, select the programme and press the CANCEL button.



Programme Delivery Control is a system of telling the VTR when a programme *actually* starts. Typically, when you want to record a programme you will tell the VTR to start recording, probably, five minutes before the *advertised* starting time of the programme and to finish ten minutes or so after the programme is *due* to finish. So even if the programme starts early or finishes late you will normally still get to see what you wanted to record. However when live programmes over-run or the day's television schedule is changed from that advertised, you may miss the desired programme which may have been delayed or even cancelled.
With PDC the VTR will wait until the signal is sent to confirm the programme is starting and the VTR will record the programme *even* if it is two or more, hours late.

1 Press the MENU button on the Remote Control to display the green MAIN MENU.

2 Press number button 2 to select USER SETTING 1/2.

3 Press **SHIFT**➔ to proceed on to the USER SETTING screen 2/2.

4 Press number button 2 to select ON in PDC DEFAULT option.

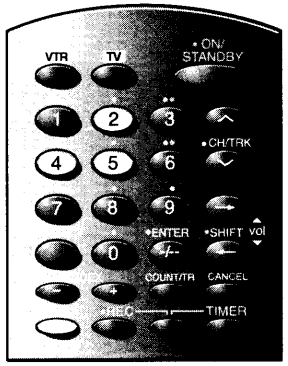
5 Press MENU to exit.

USER SETTING 2/2
1 OSD BACKGROUND (OFF)
2 PDC DEFAULT (OFF)
3 ADJUST CLOCK (ON)
4 16:9
5 (OFF)
NICAM (OFF)
Press 1 - 5 to change
Press SHIFT to previous

Note: Currently, not all broadcasters transmit PDC signals and, if you do use PDC you must set the exact advertised start and end times. Not five minutes before and ten minutes after.

User Settings continued
– Adjust Clock, nexTViewLink

You can preset the video to your chosen recording defaults by using the *USER SETTING* screens from the green MAIN MENU. **ONLY USE THESE OPTIONS IF YOU HAVE A nexTViewLink TELEVISION.**



Note: Ensure you connect the VTR to the television using a SCART Lead.

nexTViewLink:

In the future, new types of **Teletext** may be available. This Electronic Programming Guide (EPG) will enable you to utilise **nexTViewLink.**
However, before you can use nexTViewLink you must set the VTR to receive information from a nexTViewLink TV.
'TV CH P.DOWN LOAD', the first option will enable you to download the channel order that is stored on your TV.
Having done this, you can then send instructions directly from the nexTViewLink pages.

THESE OPTIONS ONLY WORK WITH A nexTViewLink TELEVISION.

By setting the ADJUST CLOCK to ON there will be no need to adjust the clock manually. This will be automatically carried out for you daily.

1 Press the MENU button on the Remote Control to display the green MAIN MENU.

2 Press button 2 to select the USER SETTING 1/2 screen. Press the **SHIFT** ➔ to go to USER SETTING 2/2 screen.

```
USER SETTING 2/2
3 ADJUST CLOCK   ( ON)
```

3 Press button 3 to turn ADJUST CLOCK OFF and press MENU to exit.

1 Press the MENU button on the remote control to select the green MAIN MENU. Press button 5 to select the nexTViewLink SETTING screen.

```
MAIN MENU
1 TIMER PROGRAMMING
2 USER SETTING
3 INSTALLATION
4 CLOCK SET
5 nexTViewLink SETTING

Press 1 - 5 to select
Press MENU to exit
```

2 Press number button 1 to select TV CH P.DOWNLOAD. By pressing the number buttons to select the channels, download the channel orders by pressing SHIFT ➔.

Having downloaded the channel order you must now instruct the VCR to accept this information. Follow the on screen instructions.

3 Press the MENU button to exit TV CH P.DOWNLOAD screen. Now select 2 TV PICTURE RECORD from the nexTViewLink SETTING menu and press number button 2 to change to ON. To turn this facility off, press button 2 whilst in the nexTViewLink SETTING screen.

```
nexTViewLink SETTING
1 TV CH P. DOWN LOAD
2 TV PICTURE RECORD (OFF)

Press 1 - 2 to select
Press MENU to exit
```

4 Having downloaded the channel order and set the TV PICTURE RECORD to ON you can now instruct the VCR to record information from the television. For example, you may be watching a news item and decide to record it. Because the setting on the PICTURE RECORD was turned ON the VCR will automatically record from the current television station, *irrespective* of what channel the VCR is set to (unlike the OTR function) by pressing the two REC buttons.

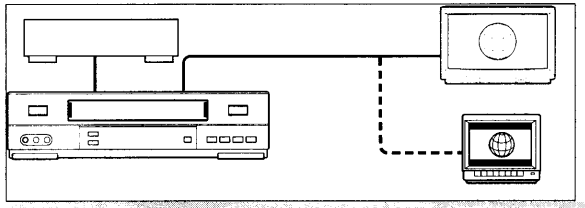
The TV will automatically switch the VCR into Timer Mode.

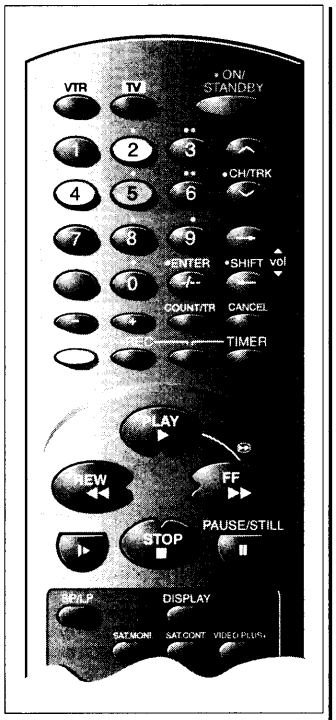
```
TV CH P. DOWN LOAD
CH P.    CH
1        --

Press SHIFT - to DOWN LOAD
Press MENU to exit
```

```
nexTViewLink SETTING
1 TV CH P. DOWN LOAD
2 TV PICTURE RECORD (OFF)

Press 1 - 2 to select
Press MENU to exit
```


16:9 (Wide Screen Compatibility

The VTR automatically adjust the image to fill the wide TV screen when you play back a tape commercially available which is recorded in the wide screen format, or when you record or play back a wide TV programme via the connected satellite receiver, etc.





1 Press the MENU buton on the remote control to select the green MAIN MENU.

```
MAIN MENU
1 TIMER PROGRAMMING
2 USER SETTING
3 INSTALLATION
4 CLOCK SET
5 nexTViewLink SETTING

Press 1 - 5 to select
Press MENU to exit
```

2 Press button 2 to select the USER SETTING 1/2 screen. Press the **SHIFT** ➔ to go to USER SETTING 2/2 screen.

```
USER SETTING 2/2
1 OSD BACKGROUND(OFF)
2 PDC DEFAULT    (OFF)
3 ADJUST CLOCK   (ON)
4 16:9           (OFF)
5 NICAM          (OFF)
  Press 1 - 5 to change
Press SHIFT to previous
Press MENU to exit
```

3 Press button 4 to set "16:9"

AUTO: Set when you use a Wide TV. The VTR detects wide TV programmes and normal TV programmes automatically when playing back and recording.

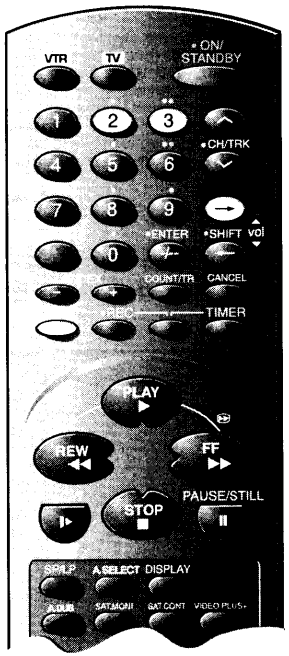
ON: The VTR always plays back and records in the mode compatible with 16:9 wide screen. Set if the VTR cannot detect wide TV programmes with "AUTO" set.

OFF: Set if you do not use a wide TV.

4 Press the MENU to exit.

NTSC Playback

NTSC is the broadcasting standard used in Japan and the USA. The VTR has a function that enables you to view NTSC tapes.



Note: The playback quality of NTSC tapes is not as good as PAL tapes and the picture and sound quality may be poor. The picture may shrink vertically, black bars may appear at both the top and bottom of the screen and Variable Speed Playback may not function correctly (*i.e.* Picture Still, Search, Slow Playback etc). Digital Auto Tracking may not work correctly.

Playback of recordings made in LP mode may be poor due to the limitations of conversion.

Playing back a cassette on a PAL ONLY TV

The VTR will decode NTSC signals, so the NTSC option available on the VTR must be set to ON.

1 Press the MENU button to display the green MAIN MENU.

MAIN MENU
1 TIMER PROGRAMMING
2 USER SETTING
3 INSTALLATION
4 CLOCK SET
5 nexTViewLink SETTING
Press 1 - 5 to select
Press MENU to exit

2 Press button 2 to select the blue USER SETTING 1/2 screen.

USER SETTING 1/2
1 TAPE SELECT (E180)
2 ECO MODE (OFF)
3 NTSC ON PAL TV (OFF)
4 VIDEO PLUS+ EXTEND (OFF)
5 COLOUR (ON)
Press 1 - 5 to change
Press SHIFT ↓ to next
Press MENU to exit

3 Press button 3 to select NTSC ON PAL TV ON.

4 Press MENU twice to exit.

Playing back a cassette on an NTSC 4.43 compatible TV

The TV will decode the NTSC signal, so the 'NTSC Playback on PAL TV' option available from the VTR must be set to OFF.

1 Press the MENU button to display the green MAIN MENU.

USER SETTING 1/2
1 TAPE SELECT (E180)
2 ECO MODE (OFF)
3 NTSC ON PAL TV (ON)
4 VIDEO PLUS+ EXTEND (OFF)
5 COLOUR (ON)
Press 1 - 5 to change
Press SHIFT ↓ to next

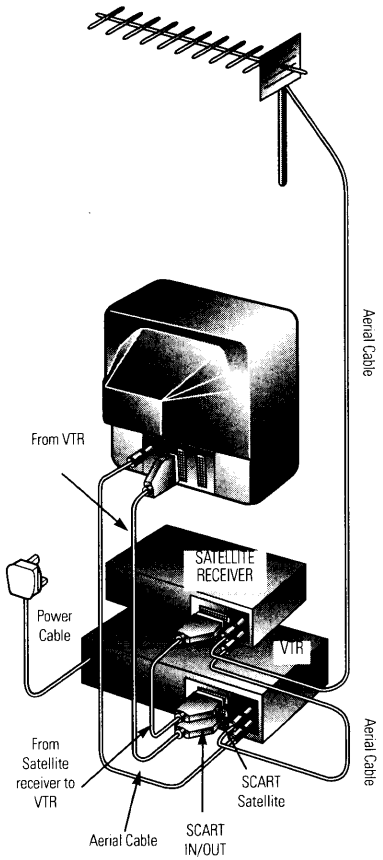
2 Press button 2 to select the blue USER SETTING 1/2 screen.

3 Press button 3 to select NTSC ON PAL TV OFF.

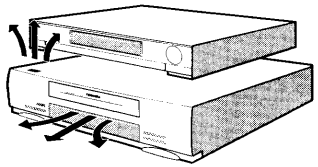
4 Press MENU twice to exit.

Connections

Satellite Compatibility:
In order for these functions to work you must have a compatible Satellite receiver.
Some Pace and Nokia Satellite receivers are not compatible with this VTR, for instance Pace have recently changed the IR control codes of the MSS100, therefore some machines will be compatible while others are not. Incompatible MSS100 receivers can be identified by the Remote Control part number "RC10" which is printed on the handset.



Positioning the Satellite receiver:



The VTR will control or 'talk' to the Satellite receiver via infra-red signals which are sent out from the VTR's display window and top-mounted sensor.

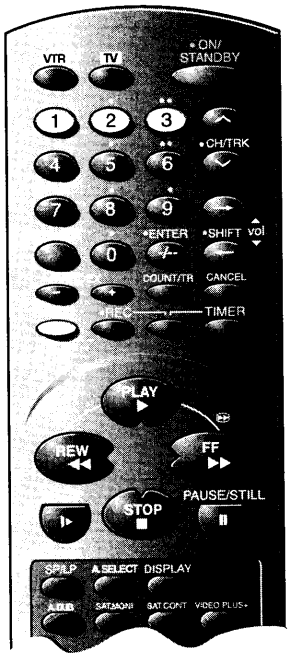
It is essential that you correctly position the VTR and Satellite receiver.

Ideally, you should position the Satellite receiver *above* the VTR.

- Do not block the VTR's sensors.
- The infra-red signals come out of the sensor windows, bounce off walls and objects in the room and are picked up by the Satellite receiver.

Note: When using a SCART Lead between the Satellite receiver and the VTR always ensure that you connect the SCART Lead to the SCART input socket marked SATELLITE IN on the VTR.

Control of Satellite Channels via Satellite Control



Having connected your Satellite receiver and positioned it correctly, you now need to tell the VTR how it is connected, what Brand of Satellite receiver you have and what order of Satellite channels have been set.

1 Press the MENU button on the Remote Control to display the green MAIN MENU.

MAIN MENU
1 TIMER PROGRAMMING
2 USER SETTING
3 INSTALLATION
4 CLOCK SET
5 nexTViewLink SETTING
Press 1 - 5 to select
Press MENU to exit

2 Press button number 3 to select the blue INSTALLATION MENU and 3 again to select the blue SATELLITE SETTING screen.

INSTALLATION MENU
1 AUTO SET UP
2 MANUAL SET UP
3 SATELLITE SETTING
SAT. CONNECTION(LINE1)
SAT. BRAND NO. (17)
4 VIDEO PLUS+ GUIDE CH
Press 1 - 4 to select
Press MENU to exit

3 Select 1 ~ 4 depending on how you have connected the Satellite receiver.

SATELLITE CONNECTION
How is your satellite connected?
1 SATELLITE SCART (SAT)
2 RF AERIAL (CH P.)
AV SCART (LINE1)
FRONT AV (LINE2)
Press 1 - 4 to select
Press MENU to exit

If you have connected the Satellite receiver using RF AERIAL (Option 2 from the SATELLITE CONNECTION) the VTR needs to be told to which channel you have tuned your Satellite. The screen will prompt you. Use the number buttons on the Remote Control, *e.g.* 06 for channel 6.

If the Satellite receiver has been connected – turned on and set to Sky News – prior to running AUTO SET UP then the Satellite receiver should be stored in position 6.

4 Once this number has been entered, press the MENU button on the Remote Control.

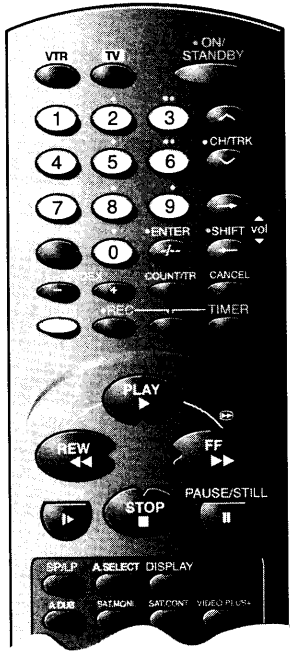
Enter the Satellite Brand Code from the table on *page 29* using the numbered buttons on the Remote Control, even if the correct code is shown.

SATELLITE BRAND NO.
What is brand of your satellite?
SAT. BRAND NO. (017)
Refer to owner's manual for 3 digit brand No.
ENTER SAT. BRAND NO. even if it is correct.
Press MENU to exit

The VTR will send a test signal to the Satellite receiver.

Continued overleaf...

Control of Satellite Channels via Satellite Control



5 If the Satellite receiver switches to channel 12 it is working correctly. Press MENU to continue and go to instruction **7** below.

SAT. BRAND NO. (017)
sending a test signal of CH 12 to your satellite

6 If it does not switch to channel 12 continue trying the list of Brand Codes until the VTR controls the Satellite.

Did SAT. CH change to 12?
YES: Press MENU
NO: Try another No.
SAT. BRAND NO. (017)
If all numbers tried select NO SAT CONTROL on next screen.
Press MENU : next screen

Note: If *no* Codes work, press the MENU button on the Remote Control and select NO SAT CONTROL on the next screen and *see step* **9** *below.*

7 You now need to tell the VTR the Channel order on your Satellite receiver.

SATELLITE CH ORDER
How is your satellite receiver tuned?
1 SKY ORDER
2 ASTRA ORDER
3 PERSONAL PREFERENCE
4 NO SATELLITE CONTROL
Press 1 - 4 to select
Press MENU to exit

Most Satellite receivers are preset to either SKY or ASTRA order. If, however, you have changed the order then you will need to select 3 PERSONAL PREFERENCE on the SATELLITE CH ORDER screen and change the VIDEO Plus+ GUIDE numbers accordingly.

Select 1~4 and this will customise your VTR to your Satellite receiver.

8 If you selected 3 PERSONAL PREFERENCE you will need to enter the channel order of the Satellite receiver (see the example right). Use the table on *page 29* to help.

Example only

GUIDE : CH P.
101 : SAT
102 : SAT
103 : SAT
104 : SAT
105 : SAT
Enter CH P. or LINE
Press SHIFT to change GUIDE
Press MENU to exit

9 If you selected 4 NO SATELLITE CONTROL you will need to manually select the correct Satellite channel on the receiver when you want to record a Satellite programme.

The set-up is now complete.

Control of Satellite Channels via Satellite Control

From the tables below look up the make of the Satellite Receiver and note the Brand Code.
The Channel order may change from time to time – contact your Satellite provider for the latest details.

Brand Name	Brand Code
TOSHIBA	017, 033
ALBA	001, 002, 009, 016, 017, 065, 066
AMSTRAD	003, 004, 005, 017, 055, 056, 076, 077, 089, 090, 091, 124
ARMSTRONG	107, 043
BIG BROTHER	007, 008, 017
BT	017, 122, 123
BUSH	002, 009, 016, 017, 065, 066
CABLE STAR	017, 101, 102, 103, 104
CABLETIME	017, 101, 102, 103, 104
CAMBRIDGE	017, 122, 123
CHANNEL MASTER	002, 003, 010, 017
D2MAC DECODER	017, 072
DRAKE	017, 045
ECHOSTAR	013, 014, 017, 092, 093, 094
FERGUSON	009, 015, 016, 017, 023, 038, 039, 059, 108
GRUNDIG	017, 019, 028, 071, 125
ITT/NOKIA	017, 026, 027, 050, 051, 052
JVC	017, 122, 123
LENCO	017, 049
MASPRO	017, 020, 064, 067
MATSUI	017, 125
NEC	017, 022, 057
NETWORK	009, 016, 017
NORDMENDE	017
PACE	009, 016, 017, 023, 038
PANASONIC	017, 061
PHILIPS	016, 017, 024, 046, 073
REDIFFUSION	017, 025
REVOX	017, 021
SAKURA	017, 062, 063, 068
SALORA	017, 026, 027, 050, 051, 052
SAMSUNG	017, 036
SIEMENS	017, 023
SENTRA	010, 017
SONY	017, 030
TATUNG/NIKKO	017, 032, 054, 058, 080, 081
TEXSCAN	017, 119, 120
THOMSON	007, 017, 039
TRISTAR	017, 031
UNIDEN	017, 067
VIDEOTRON	017, 105, 106, 107, 108, 109, 110, 121
WISI	017, 035, 037, 044, 093

Please note:
These charts were correct at time of going to press. Names and Codes may vary.

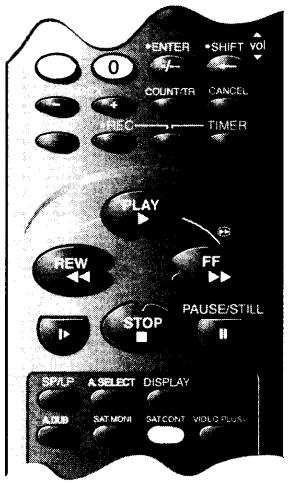
Station Name	VIDEOPLUS+ Guide Channel	SKY Order	ASTRA Order	Personal Preference
SKY ONE	101	1	8	
SKY NEWS	102	2	12	
SKY MOVIE MAX	103	3	16	
SKY PREMIERE	104	4	18	
THE DISNEY CHANNEL	111	5	26	
SKY BOX OFFICE 1	111	5	26	
SKY SPORTS 1	105	6	20	
NICKELODEON	106	7	46	
PARAMOUNT COMEDY CH.	106	7	46	
EBN	125	8	42	
TROUBLE	125	8	42	
BRAVO	125	8	42	
DISCOVERY HOME & LEISURE	124	9	41	
DISCOVERY	124	9	41	
UK GOLD	123	11	23	
QVC	136	12	38	
LIVING	130	13	34	
THE FANTASY CHANNEL	130	13	34	
MTV	109	14	15	
VH1	145	15	22	
SKY SPORTS 2	140	16	47	
SKY SPORTS 3	148	17	31	
PLAYBOY CHANNEL	148	17	31	
TV SHOP	148	17	31	
FOX KIDS	119	18	7	
NATIONAL GEOGRAPHIC	119	18	7	
GRANADA PLUS	131	19	3	
MEN & MOTORS	131	19	3	
WEATHER	127	20	60	
RACING	127	20	60	
SKY BOX OFFICE 2	127	20	60	
SKY BOX OFFICE 3	132	21	59	
SKY SCOTTISH	132	21	59	
GRANADA GOOD LIFE	142	22	58	
COMPUTER CHANNEL	142	22	58	
SKY BOX OFFICE 4	142	22	58	
CMT	138	24	51	
CHRISTIAN CHANNEL	122	26	24	
SOAP	122	26	24	
HISTORY	122	26	24	
SCI-FI	122	26	24	
TRAVEL	129	27	60	
SKY SINEMA	129	27	60	
CARTOON NETWORK	149	29	37	
TNT	149	29	37	
EUROSPORT	107	30	4	
CNN	126	31	28	

**It is important that you check that your VIDEOPLUS+ Guide Channel order stored on the VTR is the same order as your Satellite Receiver otherwise VIDEOPLUS+ programming will not work correctly.*

Control of Satellite Channels continued

Satellite Control function

Note: Some Satellite receivers may not respond to all the operations described, or may not be operated with this Remote Control. In these cases, operate the Satellite receiver using its own remote control.



Satellite Control enables you to change channels on the Satellite using the VTR Remote Control.

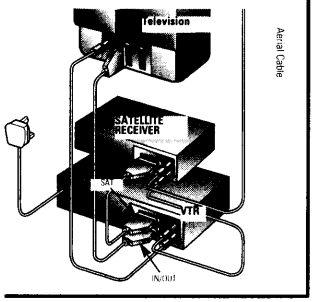
1 Press the VTR button to ensure you are in VTR mode. Press the SAT.CONT. (Satellite Control) button to switch Satellite control ON. The VTR is now in Satellite Control mode and the VTR will automatically select the Satellite Input on the VTR that you have previously set.

2 'SAT' will appear in the VTR display panel, to switch it off, press the SAT.CONT. button again.

3 Select a Satellite channel using the numbered buttons on the Remote Control. Depending on the Satellite receiver, the ways of use may differ. *For example:* to select SKY MOVIES (on channel 3) either press 0 then 3, or 0 then 3 then the ENTER button, or 0 then 3 then the ENTER button twice.

4 When you have finished press the SAT.CONT. button to switch the Satellite Control OFF. To reset the VTR to record from BBC 1, ITV etc, press the INPUT SELECT button repeatedly until a programme position number is displayed.

Some functions of the Remote Control will not work whilst in this mode. To exit this mode, press the SAT.CONT. button on the Remote Control. 'SAT' will disappear from the VTR display panel.



If the Satellite receiver has two SCART outputs, one to the VTR and another to the TV, you do not need to use this function.

To view Satellite you must select the SCART socket on the television (refer to the TV Owner's Manual).

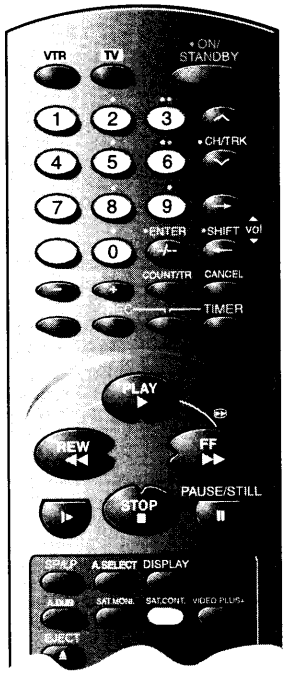
1 Press the SAT.MONI (SATELLITE MONITOR) button on the VTR Remote Control; this will loop the Satellite signal through the VTR up to the television.

2 If it has not been automatically selected, select the SCART socket on the television (refer to TV Owner's Manual).

3 To cancel press the SAT.MONI button again.

Note: If you press the MENU button on the Remote Control to display the green MAIN MENU on the TV screen the Satellite Monitor Function will cancel.

Recording from Satellite – VIDEOPlus+ DELUXE, Recording and Timer



If you have connected the VTR to a Cable system, please refer to the Cable provider for full details on how to set up using VIDEOPlus+.

If you have not followed the Satellite installation instructions as described in these *Satellite Control* pages you will NOT be able to use VIDEOPlus+.

VIDEOPlus+ SATELLITE

This gives the simplicity of VIDEOPlus+ but also allows the recording of Satellite programmes. If Satellite Control works, VIDEOPlus+ will operate in the same way, *see page 18.*

Recording can be used in the same way as described on *page 19.*

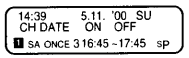
1 All you need to do is press the INPUT SELECT button on the Remote Control to select the appropriate connection.

e.g. SA for SATELLITE SCART
06 for RF channel number 6, etc.

You must ensure that the Satellite receiver is set to the required channel manually.

Timer recordings from Satellite channels can be made in the same way as described on *page 20.*

1 All you need to do is use the INPUT SELECT button on the Remote Control to select the appropriate connection:



e.g. SA for SATELLITE SCART
06 for RF channel number 6, etc.

If you have set up the Satellite Control function as described on *page 28*, you can press SAT.CONT. instead of the INPUT SELECT button. SAT.CONT. automatically selects the required Satellite channel. If you use INPUT SELECT, you must ensure that the Satellite receiver is set to the required channel manually.

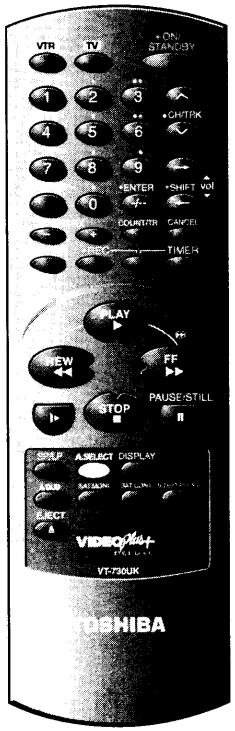
2 Press the SAT.CONT. button to display SA and enter the appropriate Channel number for the Satellite programme you wish to record using the number buttons on the Remote Control.

Hi-Fi Stereo Sound system

Selecting different audio tracks when viewing a Hi-Fi stereo recorded tape.

The VTR is capable of recording and playing sound in a number of ways. As you select the different options the display on the front of the VTR will change accordingly.

This is factory set to L + R and in most instances there will be little need to alter any of these settings.



1 Repeatedly press the A.SELECT (audio select) button on the Remote Control.

2 The output indicator on the front of the VTR will show the changes. From: L and R, L, R, *blank*, MIX L and R, and back to L and R.

3 **When the display shows both L and R:**
Audio is played from both the Left and Right Hi-Fi tracks, giving a true stereo sound.

4 **When the display shows L:**
Audio from the left soundtrack on the tape is output from the VTR.

5 **When the display shows R:**
Audio sound from the right soundtrack on the tape is output from the VTR.

6 **When the display is *blank*:**
Audio taken from the mono soundtrack is output from the VTR.

7 **When the display shows MIX L and R:**
Stereo sound taken from the Hi-Fi track PLUS the MONO 'normal audio track' is output from the VTR.

Audio Dubbing

For adding soundtracks such as narration or music to previously - recorded video tapes.

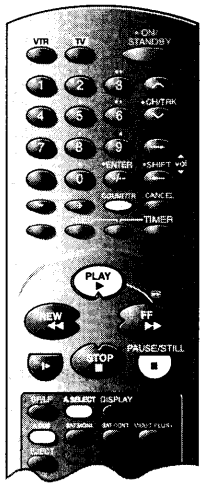
In addition to the left and right Hi-Fi audio tracks there is another soundtrack called the 'normal audio track'.

This 'normal audio track' is mono track, recorded by all VTR recorders. When you record, the VTR uses the left and right Hi-Fi tracks for the normal stereo sound, but it also records a mono version of the soundtrack on the 'normal audio track'.

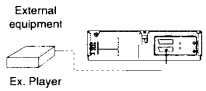
If you wish, you can record your own soundtrack onto this, the 'normal audio track' without affecting the soundtrack on the Hi-Fi.

This is ideal for putting a 'voice over onto a home movie recorded on a camcorder.

In this way, you can keep the original soundtrack. but it means you can also add your own commentary.

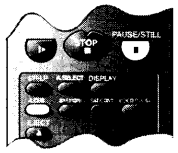


1 Connect suitable equipment *e.g.* cassette recorder to the IN/OUT (SCART) on the rear of the VTR.



2 Insert the tape to be OVER-DUBBED (the tape with the new audio track to be recorded onto).

3 Find the scene that you want to over-dub and press PAUSE/STILL on the Remote Control.

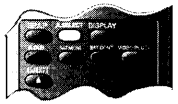


4 Press the A.DUB (audio dub) button on the Remote Control. (The screen may flicker, this is normal.)

5 Press the PAUSE/STILL button again to start both the playback and the Audio dub record.

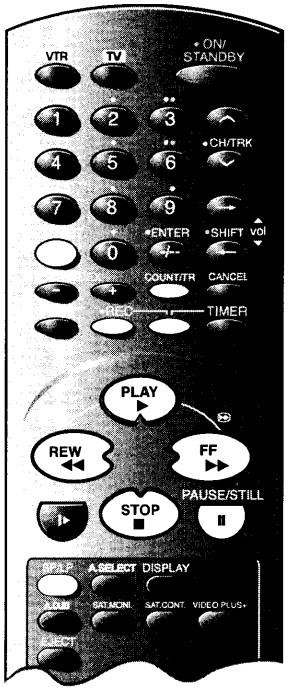
6 Play the sound from the external equipment.

7 When listening to the tape, use the A.SELECT button to select the required option.



See page 32 for the selection soundtracks.

Editing a Video Tape

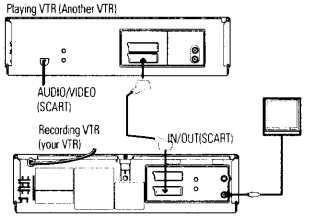


L1 (line1) SCART connection through IN/OUT (SCART 1) AUDIO/VIDEO

L2 (line2) RCA cable connection through LINE IN 2 (AUDIO/VIDEO)

SA SCART Connection through SATELLITE (SCART 2) INPUT

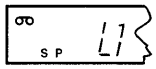
Using another VTR or external equipment, you can copy a tape.



Important
It is permissible to record television programmes only in the event that third party copyrights and other rights are not viollated.

When using the IN/OUT (SCART) socket

1 Press the I.SELECT button so that the VTR display shows "L1".



2 Press the SP/LP button to select the recording tape speed.

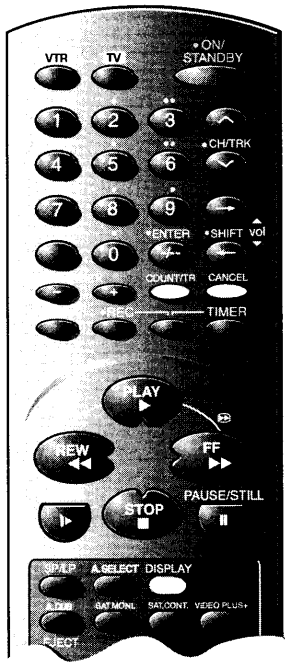
3 Play the tape on the playback VTR and pess the REC buttons to start recording on this VTR.

4 Press the STOP button on each VTR when copying is finished.

Note: The picture quality of the copied tape is slightly less than the original picture quality.

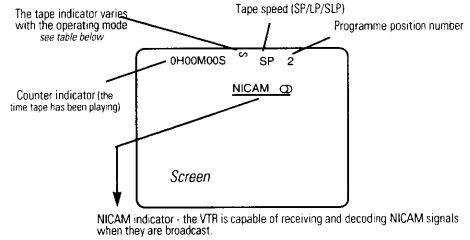
On-screen and VTR front panel displays

Pressing the DISPLAY button on the Remote Control when a tape is in PLAY will display the tape indicator on the TV screen. When you insert a tape, the counter will change from the current time to 0H00M00S. Pressing the COUNT/TR button will give you information on the VTR display panel.



Note: The counter is automatically reset to "0H00M00S" when a tape is ejected. To reset the counter at another point, such as at the beginning of a new recording, simply press the COUNT/TR and CANCEL button simultaneuslyon the Remote Control.

On Screen Displays


The tape indicator varies with the operating mode
see table below
Tape speed (SP/LP/SLP)
Programme position number
0H00M00S
SP
2
Counter indicator (the time tape has been playing)
NICAM
Screen
NICAM indicator - the VTR is capable of receiving and decoding NICAM signals when they are broadcast.

NICAM	STEREO TV programme (stereo sound)
NICAM I/II	BILINGUAL TV programme transmitted in another language (not available in the UK)
UNLIT programme	NO NICAM programme or Normal TV (Monaural sound)

Tape indicator on screen symbol		Tape indicator on screen symbol	
Ejecting a tape	⏏	Recording	●
STOP	■	Recording Pause	❚❚●
Fast-forwarding Forward picture search	▶▶	Playback	▶
		Pause/still picture Frame advance	❚❚
Rewinding Reverse picture search	◀◀	Slow Playback	▮▶

Counter – VTR Display

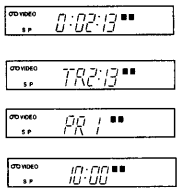
1 By repeatedly pressing the COUNT/TR button on the Remote Control, you will see:

i The time the tape has been playing.

ii TR* - the amount of tape Remaining (approx).

iii Programme position number

iV The current time



** Before the tape remaining function can work you must identity the length of tape in play - see page 21*

Index marks and Index searches

Whenever a recording starts, the VTR puts an electronic Index mark on the tape.

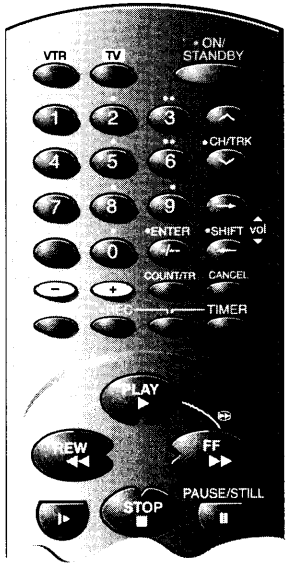
An Index search enables you to find the beginning of programmes easily and quickly.

You can put additional Index marks on a tape wherever you like, but *only during a recording.*

You cannot put in Index marks during playback of a tape.

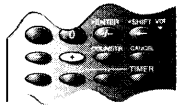
When registering Index marks, always leave at least a 1 minute gap when recording in SP and a 2 minute gap when recording in LP.

Index marks are not registered when the VTR is in pause mode during a recording.

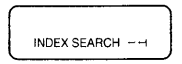


Making and finding Index marks:

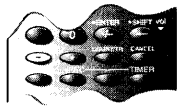
1 To register an Index mark *during recording*, simply press the INDEX + button on the Remote Control.



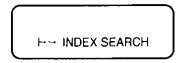
2 To find the Index marks when a tape is in playback, press the INDEX+ button to search forwards or the INDEX – button to search backwards.



3 When an Index mark is found the VTR will playback the tape for 5 seconds, after which it will continue searching for the next Index mark.



4 If you want to watch the tape from a particular Index, simply press PLAY.

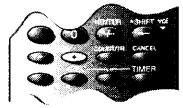


Index Skip Search:

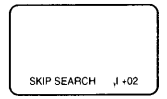
This feature will enable you to fast forward/rewind to a specific point on a tape:

E.g. if you have recorded 3 different programmes on a tape and you have rewound the tape to the beginning, by using this feature you can go directly to the start of programme 2 simply by pressing the INDEX button.

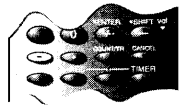
1 Press the INDEX + to start the Index search.



2 Press the INDEX + button twice more. This will take you directly to the start of the recording/index mark 2. The VTR counter will show the progress of the search.



3 These Index searches can be made forwards: (press INDEX +) or backwards: (press INDEX –).



4 To cancel an Index search simply press the PLAY or STOP button.

You can skip forward or backward a maximum of 20 Index marks.

ADDITIONAL FUNCTIONS

Multi-Brand Remote Control

The Remote Control of the VTR can be compatible with various brands of Television by setting the control codes. The TOSHIBA code has initially been set to control TOSHIBA Televisions.

For some Brands several Control Codes, or Brand Codes are allocated. Try each of them until the buttons on the Remote Control work on the Television. When the Remote Control batteries are replaced, set the Brand Code again.

BRAND CODES

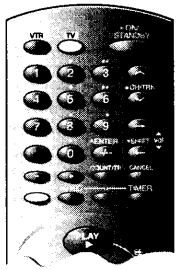
TV Brand Name	Brand Code
TOSHIBA	01, 14, 15, 16, 17, 19
AKAI	08
BANG & OLUFSEN	20
BLAUPUNKT	04
BRANDT	11
BRIONVEGA	20
CGE	19
CONTINENTAL EDISON	22
FERGUSON	11, 24, 25
FINLUX	02, 15, 20
FISHER	08
FORMENTI	20
GOLDSTAR	02
GRUNDIG	04, 15, 19
HITACHI	06, 10, 11, 22
IMPERIAL	19
JVC	07
LOWEW	02
LOEWE OPTA	02, 20
METZ	20
MITSUBISHI	02, 09, 14
MIVAR	19
NOKIA	21
NORDMENDE	10, 11, 22
PANASONIC (NATIONAL)	03, 21, 26
PHILIPS	02, 18, 20
PHONOLA	02, 18, 20
PIONEER	11, 21
RADIOLA	02, 18
RADIOMARELLI	20
REX	21
SABA	10, 11, 20, 21, 22
SALORA	21
SAMSUNG	02
SANYO	08, 14
SCHNEIDER	02
SELECO	21
SHARP	05, 14
SIEMENS	04
SINGER	20
SINUDYNE	20
SONY	13, 14
TELEAVIA	11
TELEFUNKEN	11, 24
THOMSON	10, 11, 22
WEGA	20
YOKO	02

See the table opposite for the Television Brand Codes.

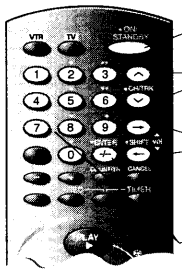
1 Press the TV button on the Remote Control.

2 Hold down the TV button on the Remote Control and enter the two digits of the TV's Brand Code using the number buttons.

3 Release the TV button.



4 With the Remote Control pointing at the Television use each button listed below to ensure that the TV is operated correctly:–



ON/STANDBY:
Turns to Television on or off.

CH/TRK:
Selects the TV channels up or down.

VOL:
Adjusts the sound level.

Number Buttons and ENTER-/--:
To select TV channels. The way of use may differ with varying models of televisions.

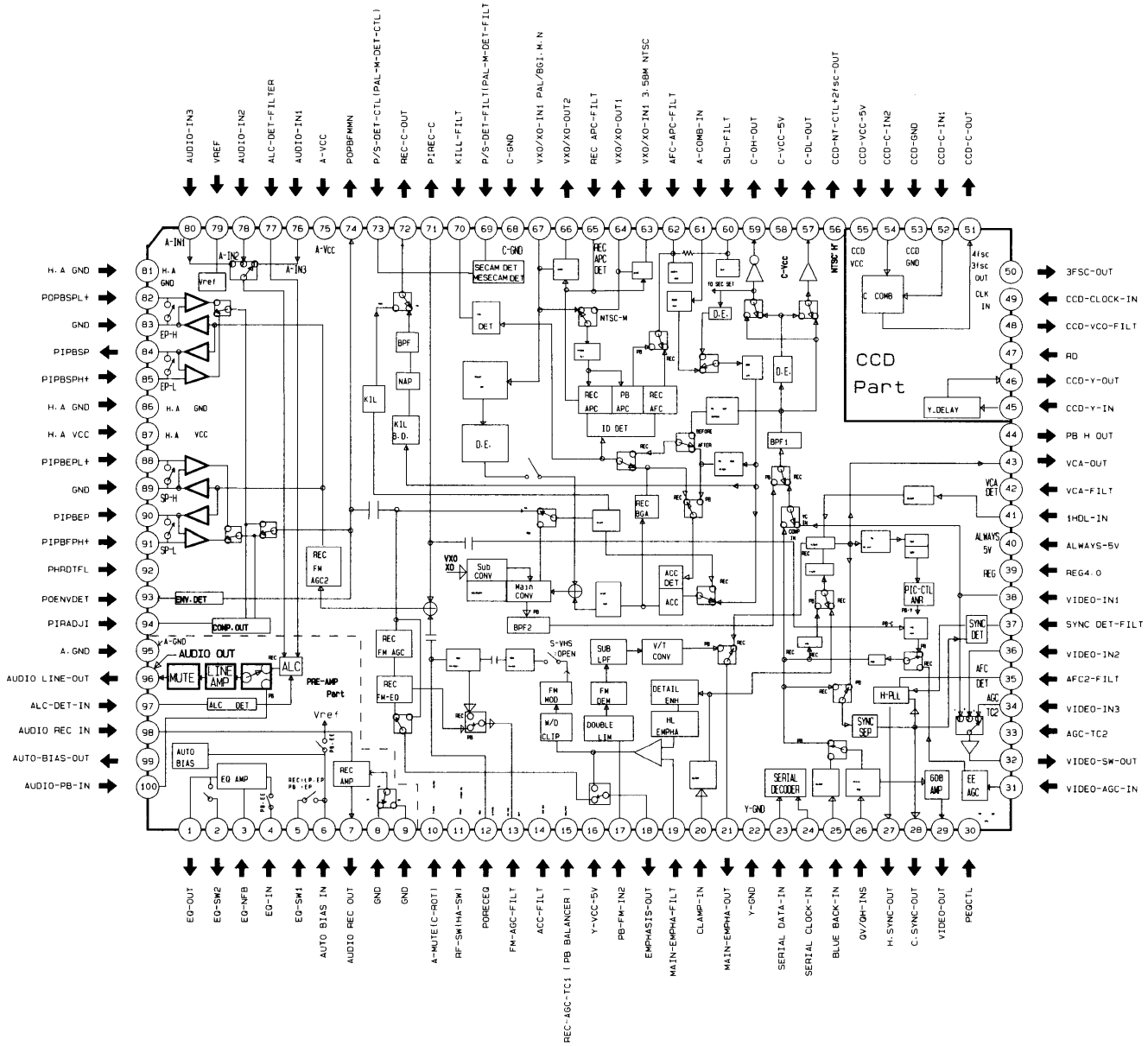
E.g. ***To select Channel 3:***
Press number buttons 0 3
or
Press number buttons 0 3 and the ENTER button
or
Press the ENTER button and the number button 3.

To select Channel 16:
Press number buttons 1 6
or
Press number buttons 1 6 and then the ENTER button
or
Press the ENTER button twice and then the number buttons 1 and 6.

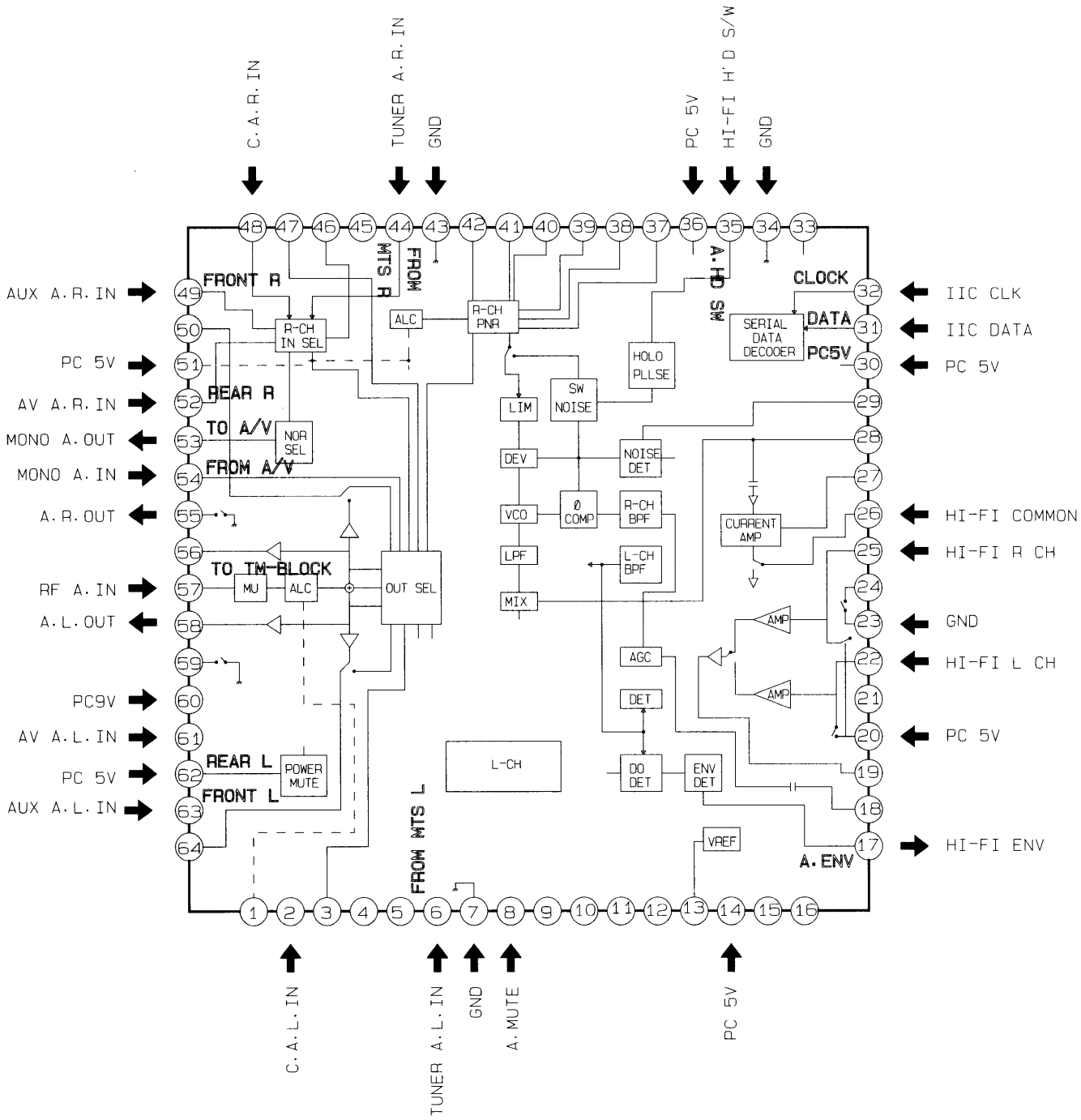
Note: Some TVs may not respond to all the operations listed above or may not be operated at all with the VTR Remote Control. In which case operation of the TV will have to be by its own Remote Control.

2-2 IC Blocks

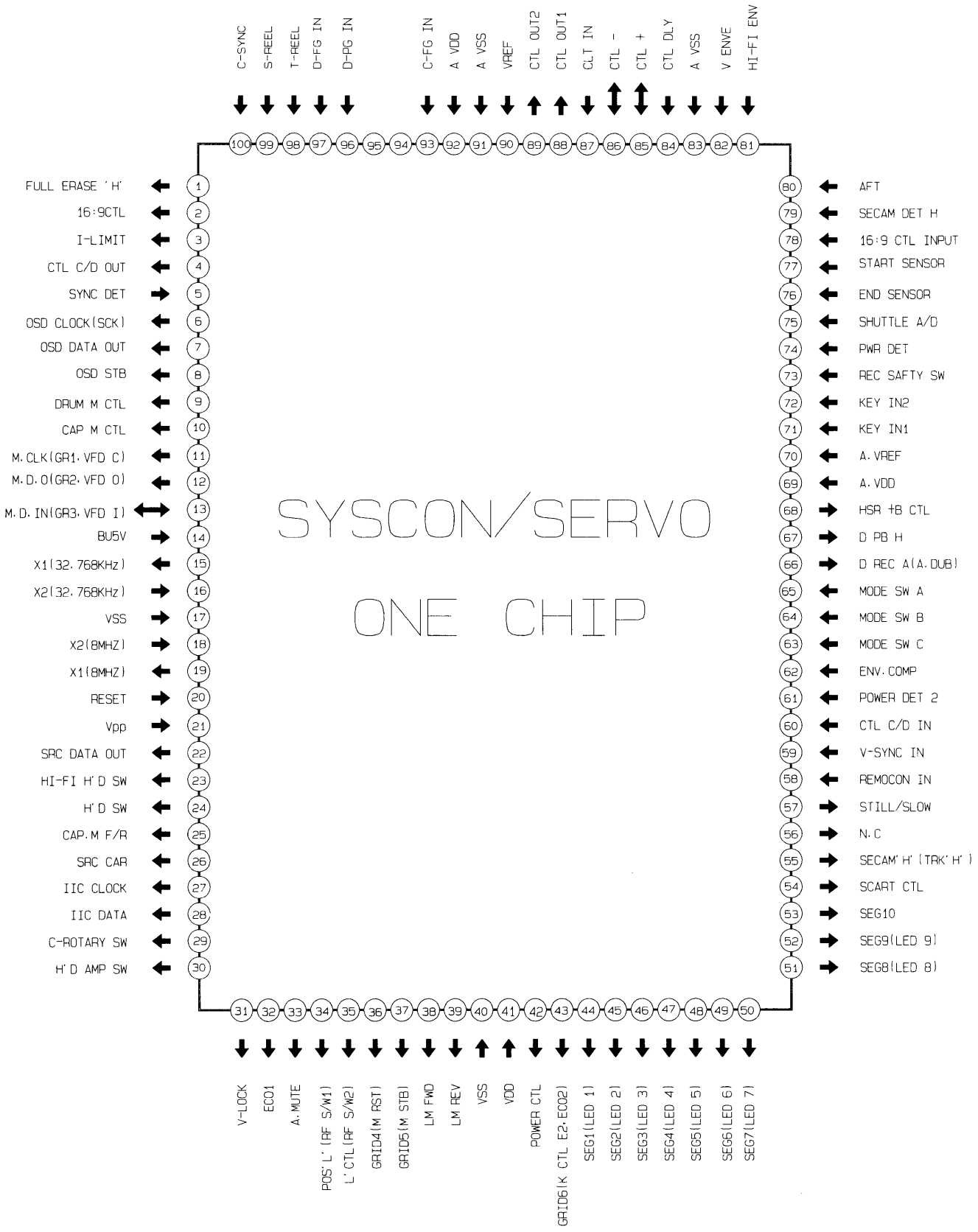
2-2-1 IC301 (LA71598M)



2-2-2 IC501 (LA72634AM)



2-2-3 IC601 (uPD784927)



3. Product Specifications

Specifications and features are subject to change without notice.

OPERATION	DESCRIPTION
Power supply	230V/240V ("UK" Models), 230V ("EF/EG/W" Models) AC, 50Hz
Power consumption	18 Watts (Hi-Fi Models), 16 Watts (Non Hi-Fi Models), 5W (normal standby), 3W (ECO Mode standby)
External dimensions	360 (W) x 94 (H) x 298 (D) mm
Mass	3.3 kg approx.
Receiing channels	UK : VHF A-J (IRE), UHF 21-69, CATV X, Y, Z S1-41 EG : VHF E2-12 R2-12 A-H, UHF 21-69, CATV X, Y, Z S1-41 EF : VHF E2-12 F1-6 FB-FC, UHF E21-69, CATV X, Y, Z B-Q S1-41 70-92 W : VHF E2-12 R2-12 A-H, UHF 21-69, CATV X, Y, Z S1-41
Format	VHS standard
Video signal system	CCIR 625 lines, 50 fields, PAL colour signal, 525 lines NTSC colour (PB only)
Recording system/Playback system	UK : PAL SP, LP VHS format EG/W : PAL/MESECAM SP, LP VHS format EF : PAL/MESECAM/SECAM SP, LP VHS format PAL/MESECAM/SECAM SP VHS format (V-230F/V-229F)
NTSC playback	NTSC SP/SLP tape playback : NT4.43/NT PB ON PAL TV (V-230F/V-229F is SP only)
Fast forward/Rewind time	Within approx. 150s (When E-180 video cassette is used)
Aerial input/output	75 ohm coaxial
Video input/output	AUDIO/VIDEO SCART socket, 1.0Vp-p, 75ohm
Audio input	AUDIO/VIDEO SCART socket, 308mV(rms), more than 1.0Kohm
Audio output	AUDIO/VIDEO SCART socket, 308mV(rms), less than 1.0Kohm
Audio frequency range	20Hz - 20KHz (Hi-Fi model only)
Operating conditions	Temperature : +5°C - +40°C Humidity : less than 80% RH

4. Disassembly and Reassembly

4-1 Cabinet Assembly

4-1-1 Cabinet Top Removal

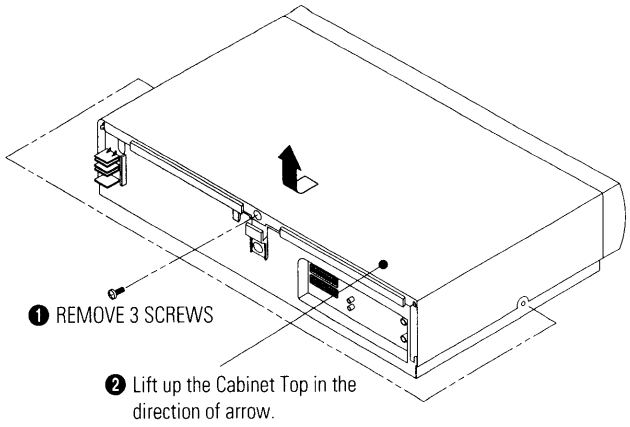


Fig. 4-1 Cabinet Top Removal

4-1-2 Bottom Cover Removal

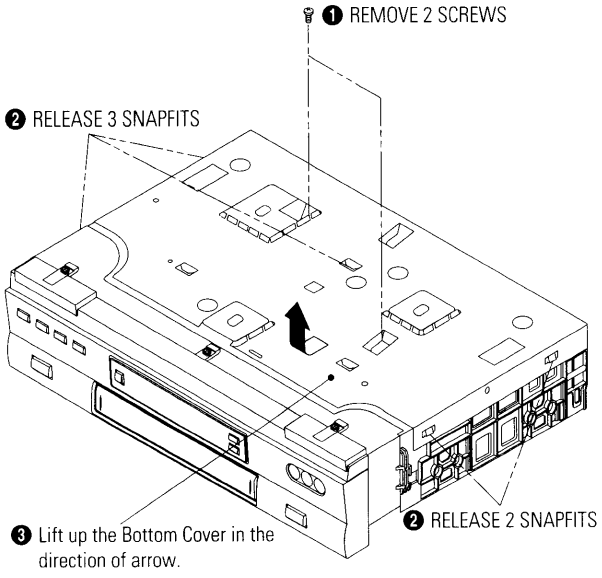


Fig. 4-2 Bottom Cover Removal

4-1-3 Ass'y Front Panel Removal

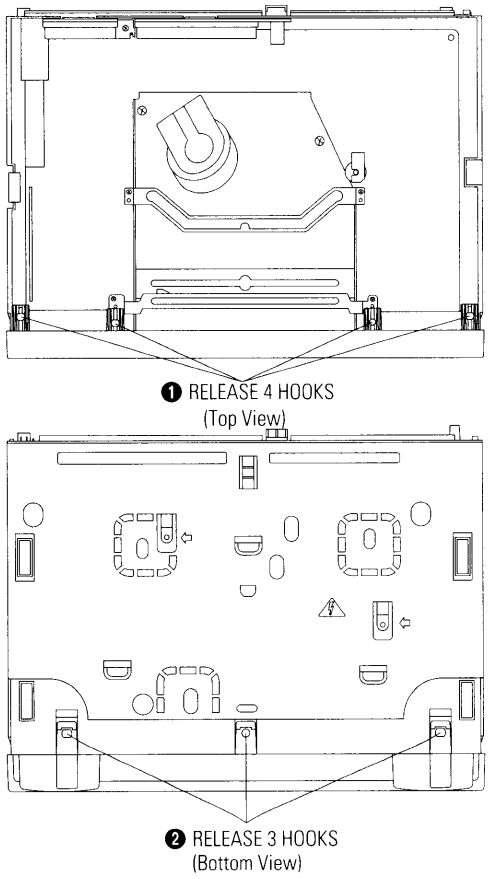


Fig. 4-3 Ass'y Front Panel Removal

4-1-4 Jack PCB Removal

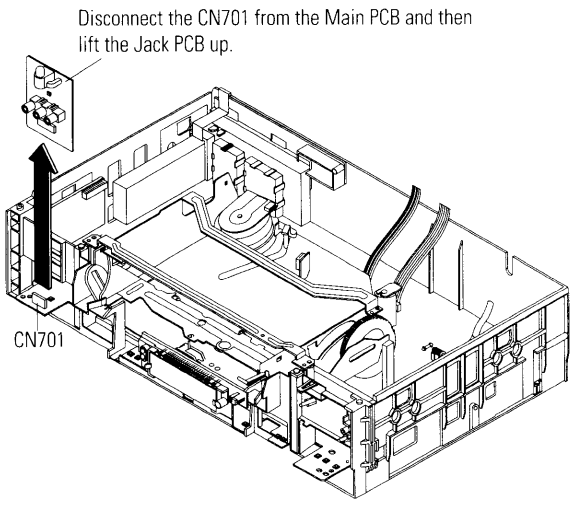


Fig. 4-4 Jack PCB Removal

4-1-5 Chassis Removal

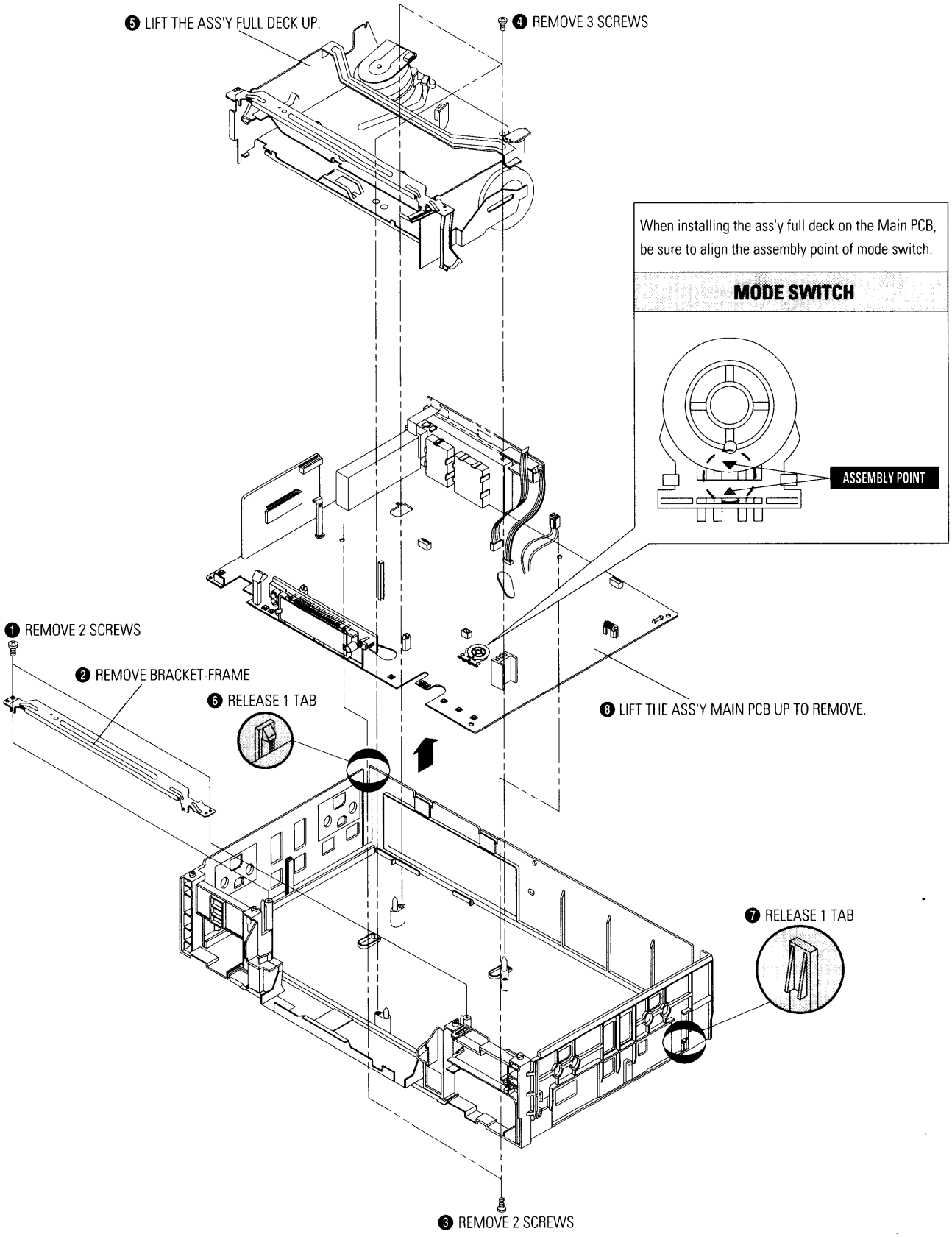

❺ LIFT THE ASS'Y FULL DECK UP.
❹ REMOVE 3 SCREWS
When installing the ass'y full deck on the Main PCB, be sure to align the assembly point of mode switch.
MODE SWITCH
ASSEMBLY POINT
❶ REMOVE 2 SCREWS
❷ REMOVE BRACKET-FRAME
❻ RELEASE 1 TAB
❽ LIFT THE ASS'Y MAIN PCB UP TO REMOVE.
❼ RELEASE 1 TAB
❸ REMOVE 2 SCREWS

Fig. 4-5 Chassis Removal

4-2 Deck Parts Locations

4-2-1 Top View

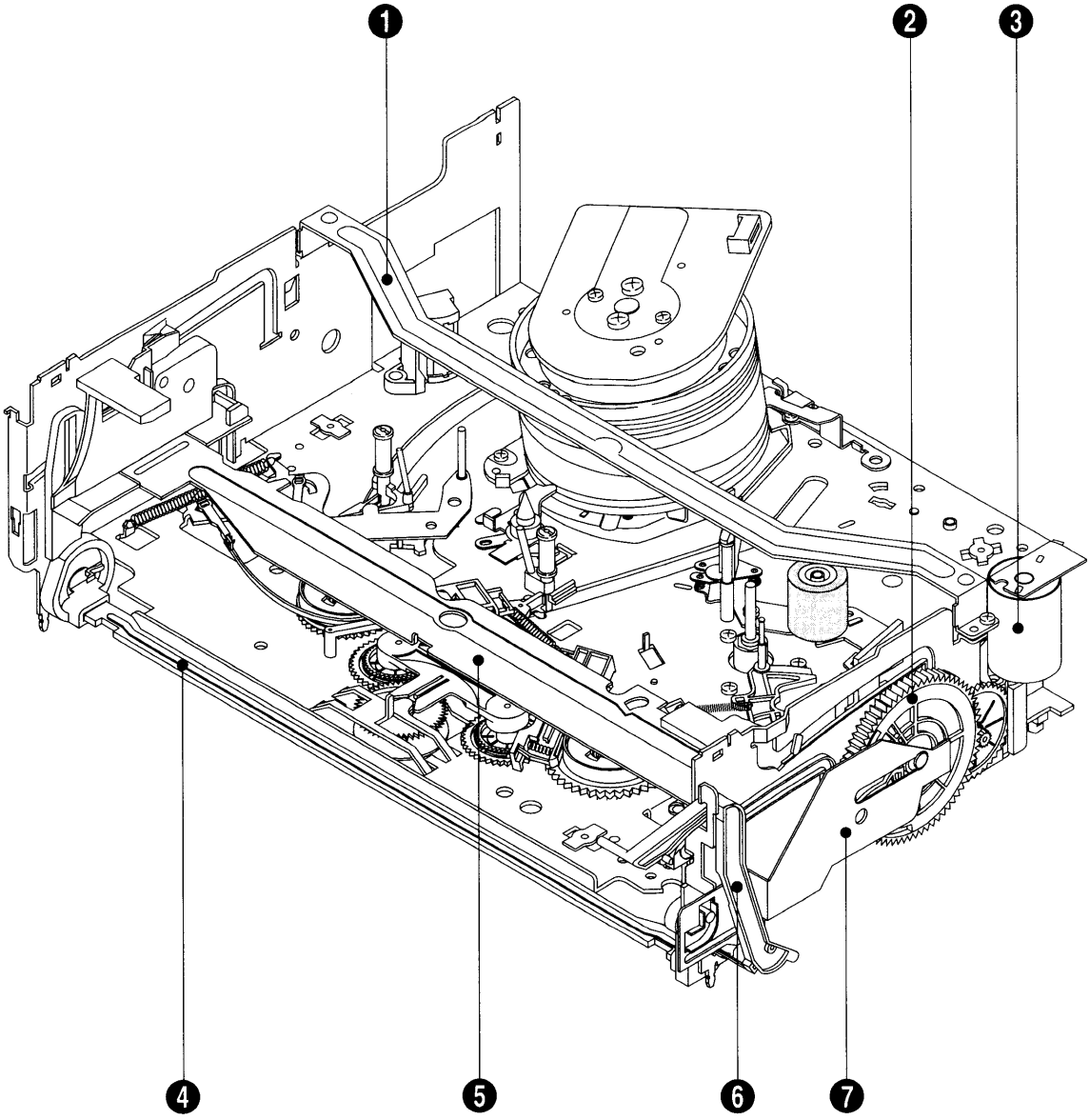


Fig. 4-6 Top parts Location-1

1. BRACKET FL TOP (Optional)
2. GEAR FL CAM
3. MOTOR LOADING ASS'Y
4. LEVER FL ARM ASS'Y
5. HOLDER FL CASSETTE ASS'Y
6. LEVER FL DOOR
7. SLIDER FL DRIVE

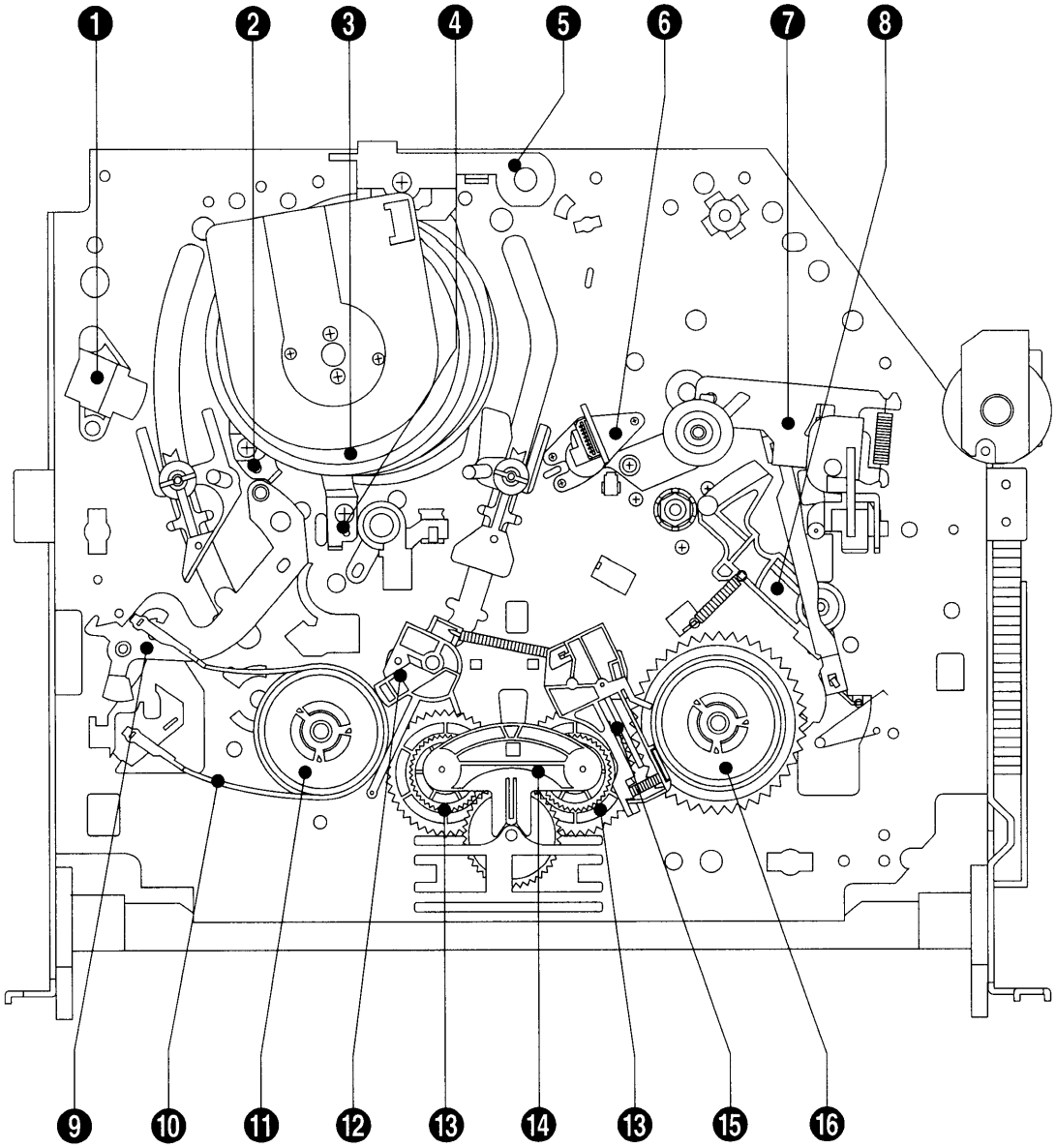


Fig. 4-7 Top Parts Location-2

1. FE HEAD
2. PLATE CYLINDER C
3. CYLINDER ASS'Y
4. PLATE CYLINDER B
5. PLATE CYLINDER A
6. ACE HEAD ASS'Y
7. UNIT PINCH ASS'Y
8. LEVER #9 GUIDE ASS'Y
9. LEVER TENSION ASS'Y
10. BAND BRAKE ASS'Y
11. DISK S REEL
12. LEVER S BRAKE ASS'Y
13. GEAR IDLE
14. LEVER IDLE
15. LEVER T BRAKE ASS'Y
16. DISK T REEL

4-2-2 Bottom View

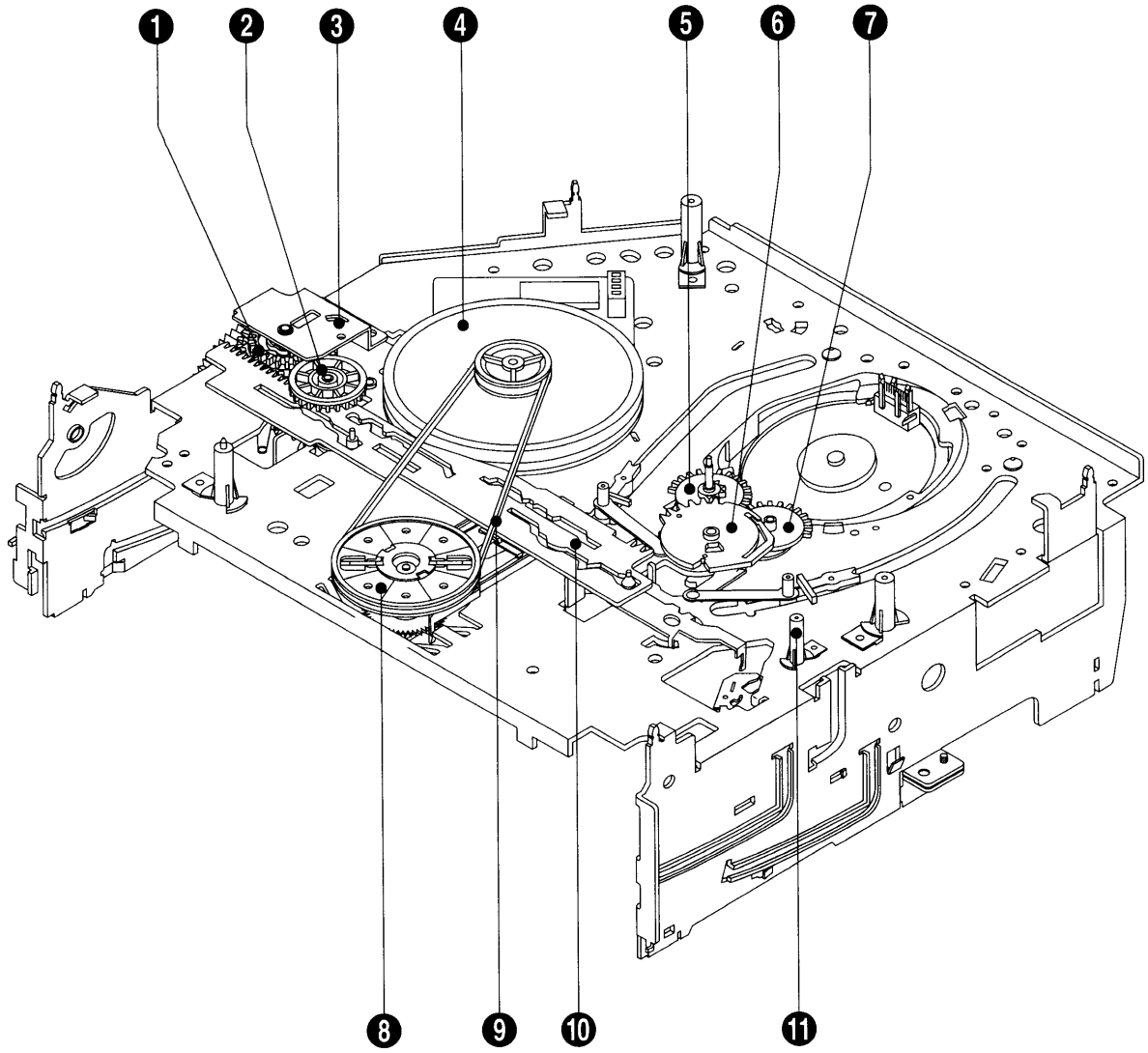


Fig. 4-8 Bottom Parts Location

1. GEAR JOINT 1
2. GEAR JOINT 2
3. BRAKET GEAR
4. MOTOR CAPSTAN ASS'Y
5. LEVER T LOAD ASS'Y
6. GEAR LOADING DRIVE
7. LEVER S LOAD ASS'Y
8. HOLDER CLUTCH ASS'Y
9. BELT PULLEY
10. SLIDER CAM
11. SLEEVE TENSION

4-3 Main Deck

4-3-1 Bracket FL Top Removal (Optional)

1) Remove 2 screws ❶.
2) Remove the Bracket FL Top ❷.

Note : Take care not to change assembly direction.

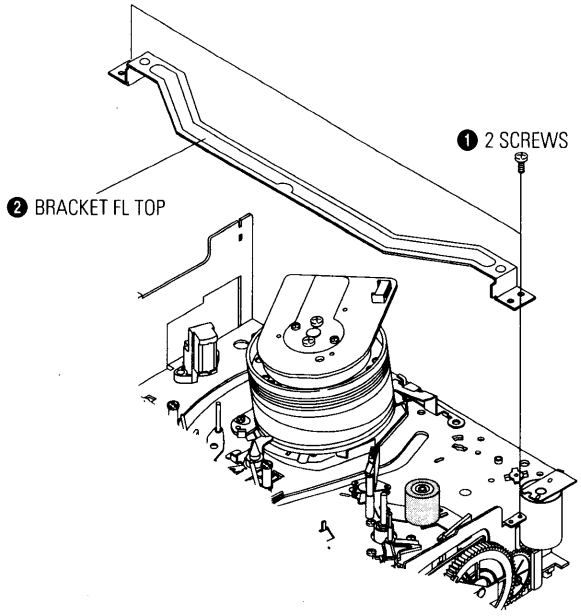


Fig. 4-9 Bracket FL Top Removal

4-3-2 Lever FL Door Removal

1) Rotate the Lever FL Door ❶ in the direction of arrow "A".
2) Release the Hook ❷, remove the Lever FL Door ❶ in the direction of arrow "B".

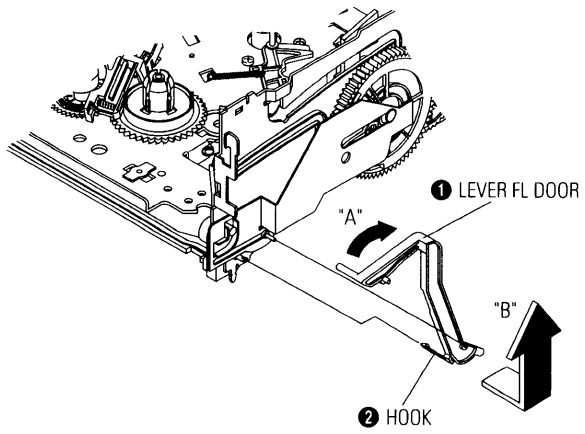


Fig. 4-10 Lever FL Door Removal

4-3-3 Holder FL Cassette Ass'y Removal

1) Remove the Lever FL Door. (Refer to Fig. 4-10)
2) Pull the Holder FL Cassette Ass'y ❶ to the eject position.
3) Pull the Holder FL Cassette Ass'y ❶ as grasping the Holder FL Cassette Ass'y ❶ and Lever FL Cassette-R ❷ in the same time to release hooking from Main Base until the Boss [A], [B] of Holder FL Cassette Ass'y ❶ is taken out from the Rail [C], [D].
4) Lift the Holder FL Cassette Ass'y ❶ in the direction of arrow "B" in this time, you have to grasp the Lever FL Cassette-R ❷ continuously until the Holder FL Cassette Ass'y ❶ is taken out completely.

Note : Be sure to insert Lever FL Cassette-R ❷ in the direction of "A" to prevent separation and breakage of the Lever FL Cassette-R ❷ at disassembling and reassembling.

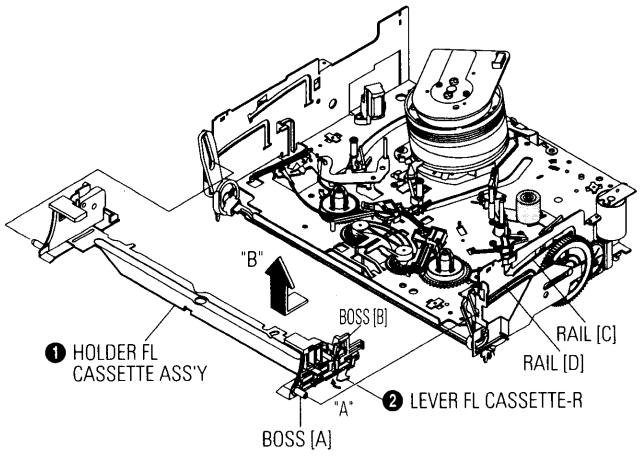


Fig. 4-11 Holder FL Cassette Ass'y Removal

4-3-4 Lever FL Arm Ass'y Removal

1) Remove the Lever FL Door. (Refer to Fig. 4-10)
2) Remove the Holder FL Cassette Ass'y. (Refer to Fig. 4-11)
3) Release the Hook ❶ in the direction of arrow "A", pull out the Lever FL Arm Ass'y ❹ from the Boss of Main Base.
4) Remove the Lever FL Arm Ass'y ❹ in the direction of arrow "B".

Assembly : When reinstalling, be sure to reassemble Lever FL Arm Ass'y ❹ after you insert the Boss ❷ in Groove [A] of Slider FL Drive ❸.

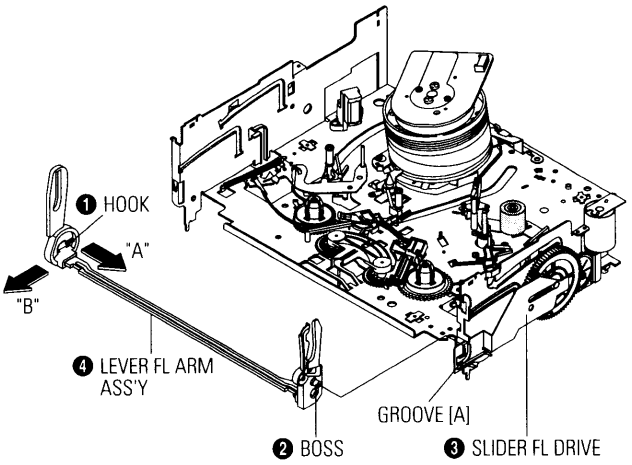


Fig. 4-12 Lever FL Arm Ass'y Removal

4-3-5 Slider FL Drive Removal

1) Pull the Slider FL Drive ❶ to the front direction.
2) Remove the Slider FL Drive ❶ in the direction of arrow. (Refer to Fig. 4-13)

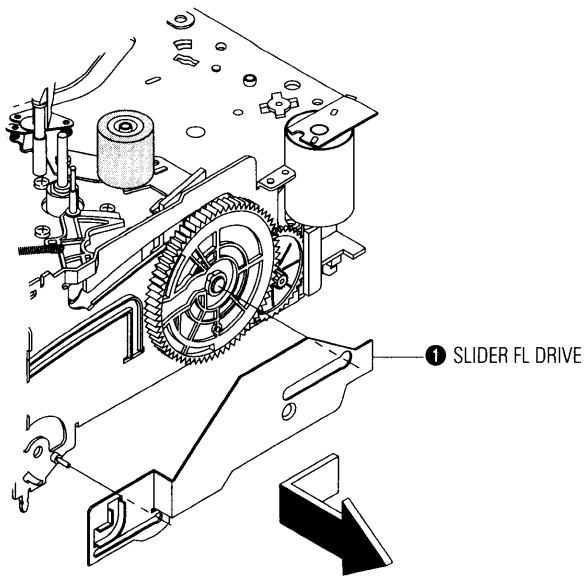


Fig. 4-13 Slider FL Drive Removal

4-3-6 Bracket Gear, Gear FL Cam, Gear Joint 1, 2 Removal

1) Remove screw ❶.
2) Lift the Bracket Gear ❷.
3) Remove the Gear FL Cam ❸.
4) Lift the Gear Joint 2 ❹, Gear Joint 1 ❺.

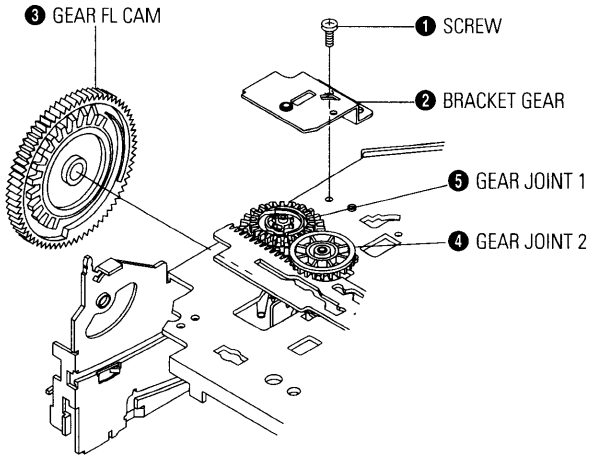


Fig. 4-14 Bracket Gear, Gear FL Cam, Gear Joint 1, 2 Removal

4-3-7 Assembly of Gear FL Cam, Gear Joint 1, 2

1) Be sure to align dot mark of Gear Joint 1 ❶ with dot mark of Gear Joint 2 ❷ as shown Fig. 4-15 (Refer to Timing Point 1), confirm the Timing Point 2 of the Gear Joint 2 ❷ and Slider Cam ❸.
2) Align the Gear FL Cam ❹ with the Gear Worm Wheel Post as shown detail drawing. (Refer to Timing Point 3)

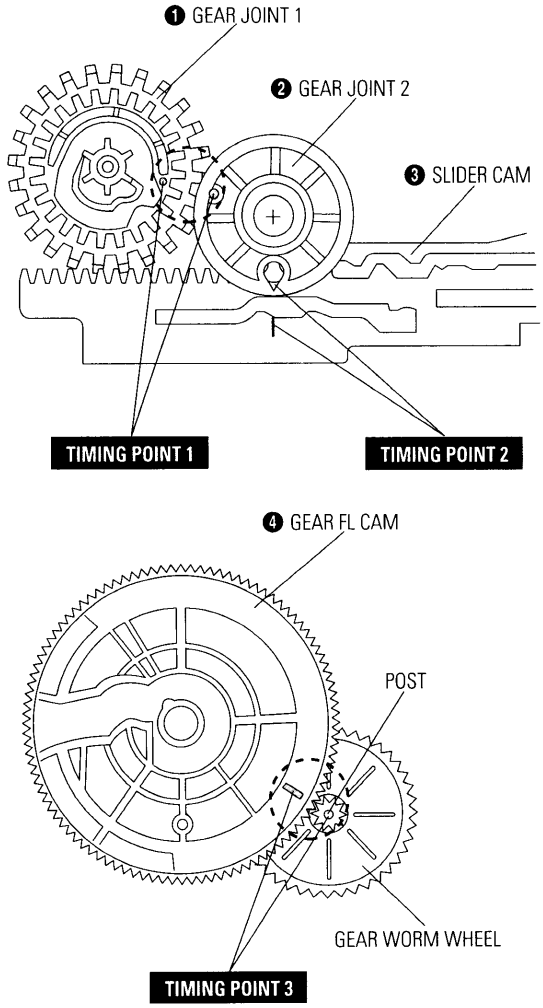


Fig. 4-15 Assembly of Gear FL Cam, Gear Joint 1, 2

4-3-8 Holder Worm, Gear Worm, Gear Worm Wheel Removal

1) Release the Hook [A] in the direction of arrow and, remove the Holder Worm ❶.
2) Remove the Gear Worm ❷.
3) Remove the Gear Worm Wheel ❸. (After removing the Gear FL Cam as shown Fig. 4-14)

Note : Secure the Hook [A] after installing the Holder Worm ❶.

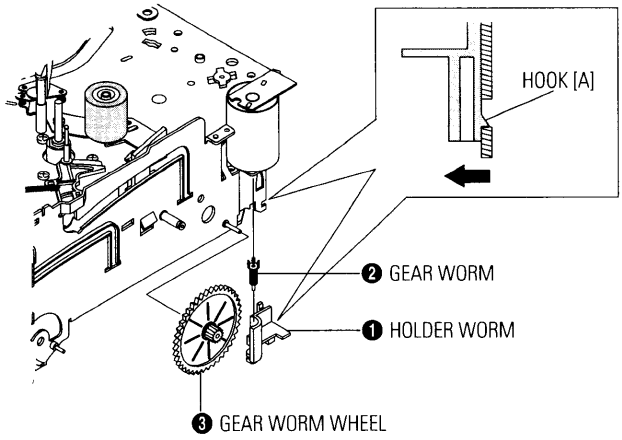


Fig. 4-16 Holder Worm, Gear Worm, Gear Worm Wheel Removal

4-3-9 Motor Loading Ass'y Removal

1) Remove the screw ❶.
2) Remove the Motor Loading Ass'y ❷.

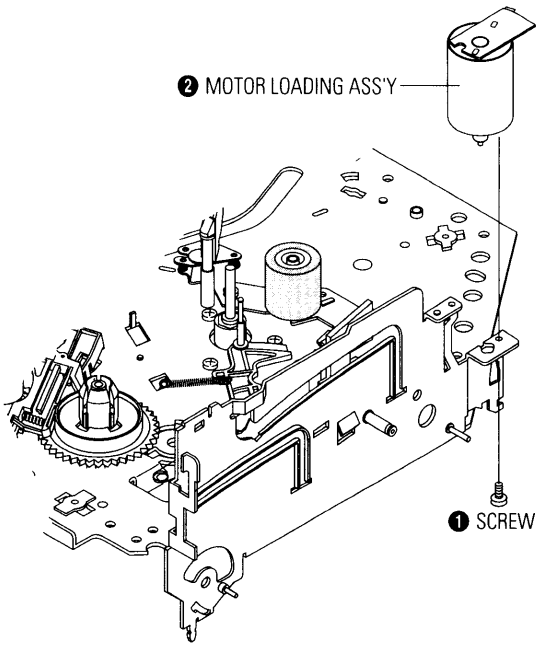


Fig. 4-17 Motor Loading Ass'y Removal

4-3-10 Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y Removal

1) Remove the Belt Pulley. (Refer to Fig. 4-34)
2) Remove the Gear Loading Drive ❶ after releasing Hook [A] in the direction arrow as shown in detail drawing.
3) Remove the Slider Cam ❷.
4) Remove the Lever T, S Load Ass'y ❸, ❹.

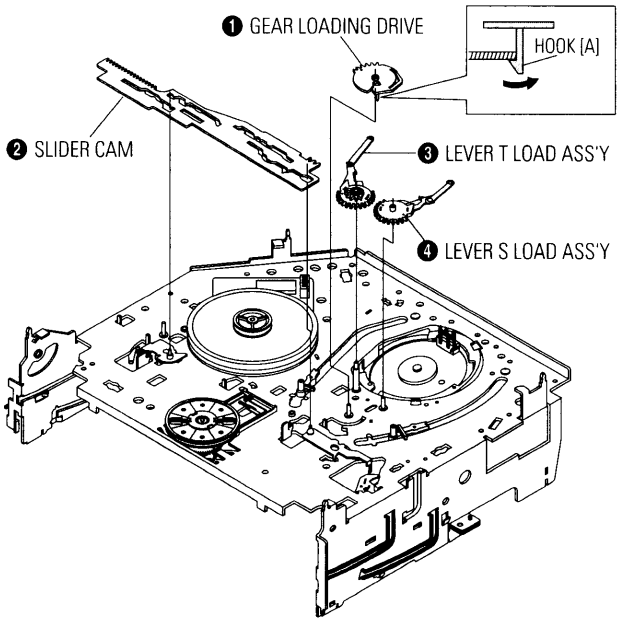


Fig. 4-18 Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y Removal

4-3-11 Assembly of Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y

1) When reinstalling, be sure to align dot of Lever T Load Ass'y ❶ with dot of Lever S Load Ass'y ❷ as shown in drawing. (Refer to Timing Point 1)
2) Insert the Pin A, B, C, D into the Slider Cam ❸ hole.
3) Be sure to align dot of Lever T Load Ass'y and dot of Gear Loading Drive ❹. (Refer to Timing Point 2)
4) Align dot of Gear Loading Drive with mark of Slider Cam as shown in drawing. (Refer to Timing Point 3)

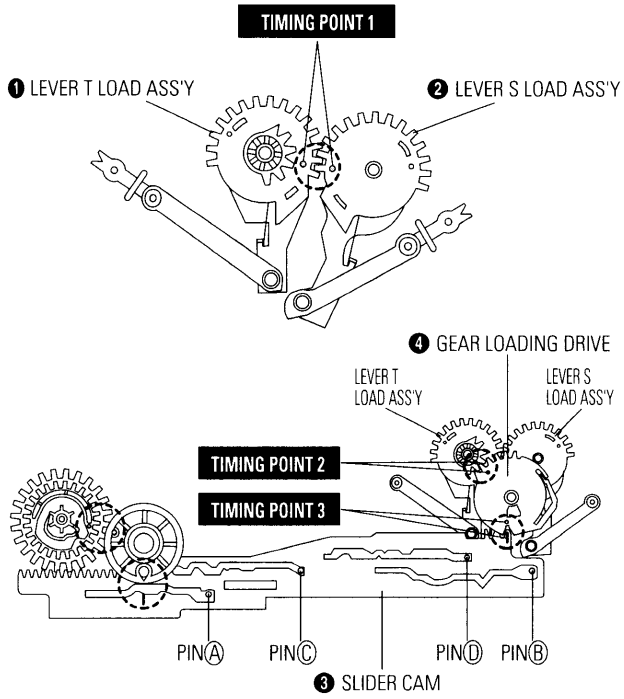


Fig. 4-19 Assembly of Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y

4-3-12 Lever Tension Ass'y, Band Brake Ass'y, Sleeve Tension Removal

1) Remove the Spring Tension ❶.
2) In bottom side of Deck, remove the Sleeve Tension ❷ after rotating it right or left as lifting locking edge of Sleeve Tension.
3) Remove the side "a" of the Band Brake Ass'y ❹ in the direction of arrow "A" from the Lever Tension Ass'y ❸.
4) Remove the side "b" of the Band Brake Ass'y ❹ in the direction of arrow "B" from the Main Base.

Note :
1) When replacing the Lever Tension Ass'y, be sure to apply oil in the Sleeve Tension.
2) Take care not to touch stain on the felt side, and not to be folded and broken Band Brake Ass'y.

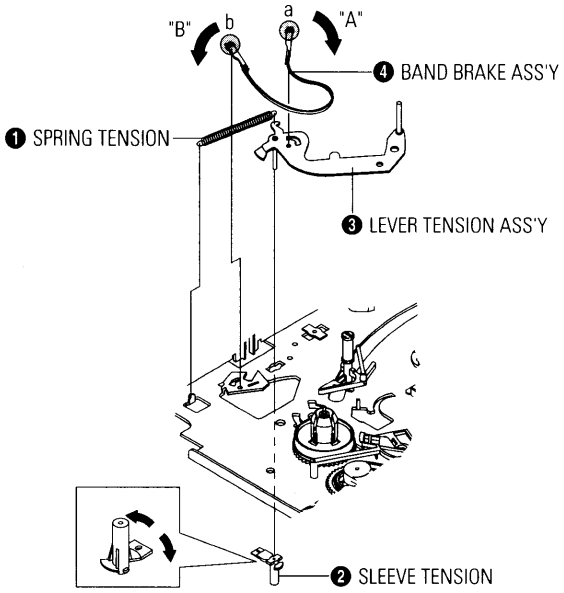


Fig. 4-20 Lever Tension Ass'y, Band Brake Ass'y, Sleeve Tension Removal

4-3-13 Lever S, T Brake Ass'y Removal

1) Release the Hook [A] and the Hook [B], [C] in the direction of arrow as shown in Fig. 4-21.
2) Lift the Lever S, T Brake Ass'y ❶, ❷ with Spring Brake ❸.

Assembly :
1) Assembly the Lever S Brake Ass'y ❶ on the Main Base.
2) Assembly the Lever T Brake Ass'y ❷ with Spring Brake ❸.

Note : Take extreme care not to be folded and transformed spring Brake at removing or reinstalling.

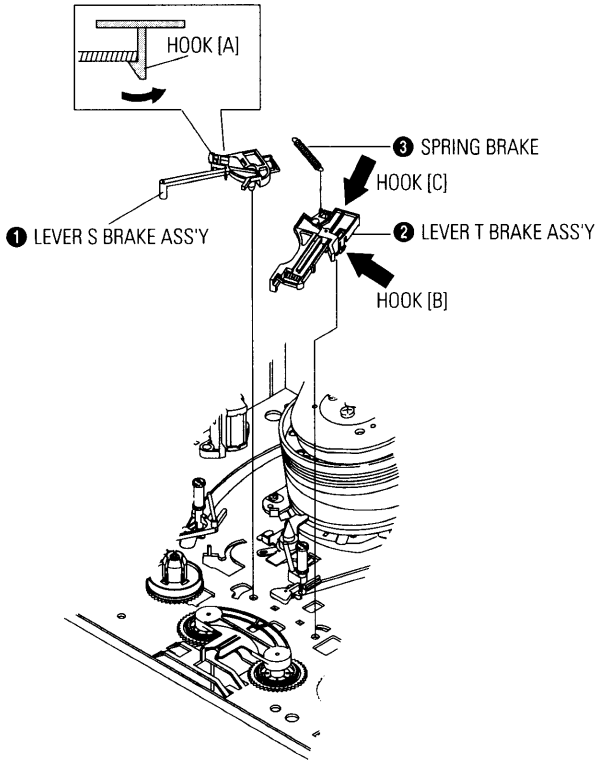


Fig. 4-21 Lever S, T Brake Ass'y Removal

4-3-14 Lever Idle Ass'y Removal

1) Push the Lever Idle ❶ in the direction of arrow "A", "B".
2) Lift the Lever Idle ❶.

Assembly :
1) Apply oil in two Bosses of Lever Idle ❶.
2) Assemble the Gear Idle ❷ with the Lever Idle ❶.

Note : When replacing the Gear Idle ❷, be sure to add oil in the boss of Lever Idle ❶.

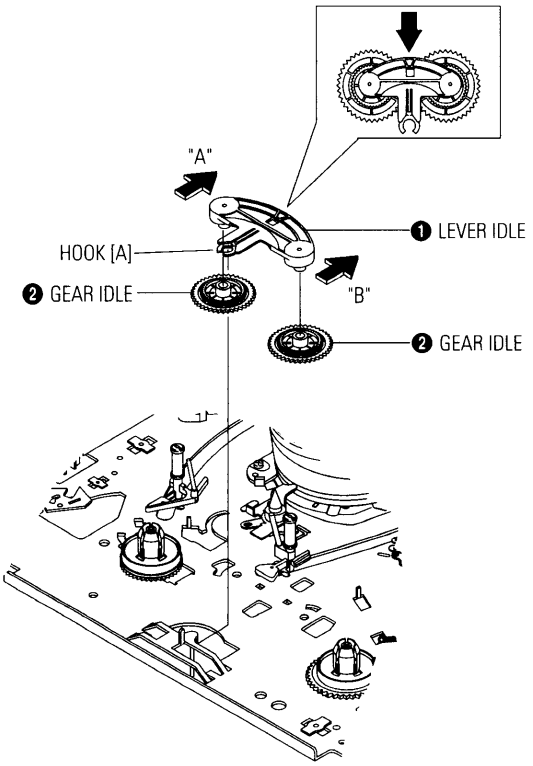


Fig. 4-22 Lever Idle Ass'y Removal

4-3-15 Disk S, T Reel Removal

1) Lift the Disk S, T Reel ❶, ❷.

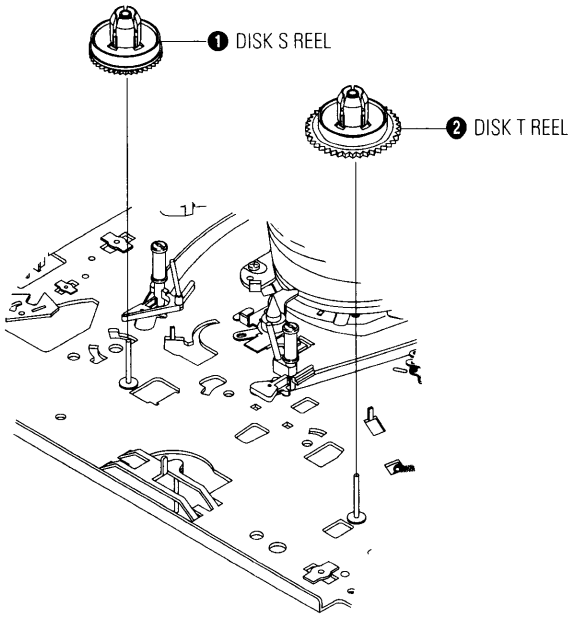


Fig. 4-23 Disk S, T Reel Removal

4-3-16 Holder Clutch Ass'y Removal

1) Remove the Washer Slit ❶.
2) Lift the Holder Clutch Ass'y ❷.

Note : When you reinstall Holder Clutch Ass'y ❷.
1) Check the condition of spring as shown in detail A.
2) Don't push Holder Clutch Ass'y down with excessive force. Just insert Holder Clutch Ass'y into post center with dead force and rotate it smoothly. Be sure to confirm that spring is in the slit of Gear Center Ass'y as shown in detail B.

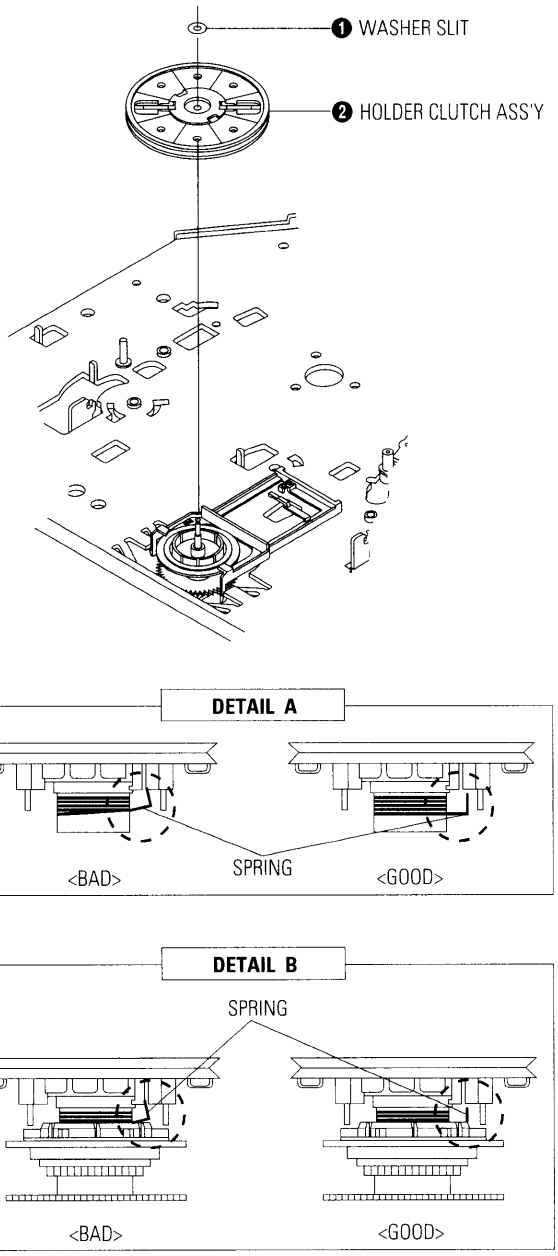


Fig. 4-24 Holder Clutch Ass'y Removal

4-3-17 Lever Up Down Ass'y, Gear Center Ass'y Removal

1) Remove the 2 hooks in the direction of arrow as shown Fig. 4-25 and lift the Lever Up Down Ass'y ❶.
2) Lift the Gear Center Ass'y ❷.

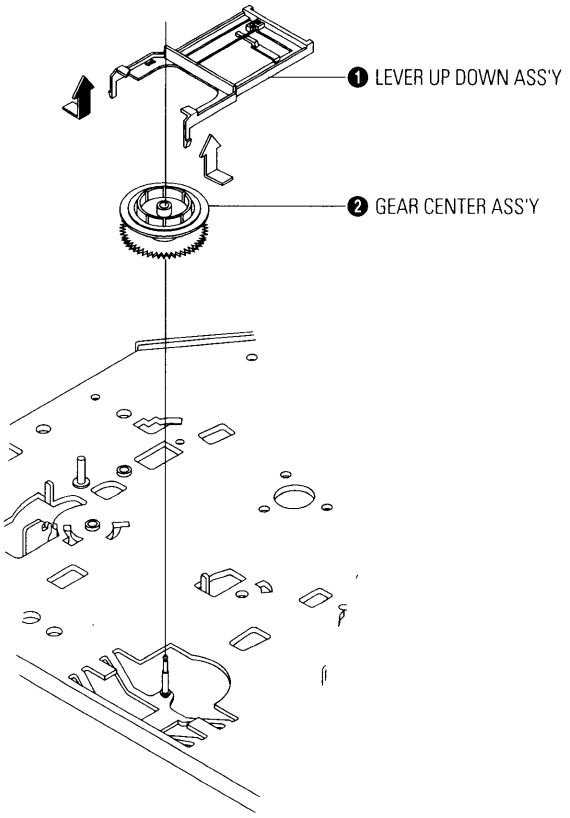


Fig. 4-25 Lever Up Down Ass'y, Gear Center Ass'y Removal

4-3-18 Assembly of Lever Up Down Ass'y, Gear Center Ass'y

1) Insert the Lever Up Down Ass'y ❶ in the 2 rectangular holes on Main Base.
2) Lift the Lever Up Down Ass'y ❶ about 35 degree. (Refer to Fig. 4-26)
3) Insert Ring ❹ of the Gear Center Ass'y ❷ in the Guide ❺ of the Lever Up Down Ass'y ❶.
4) Insert the Gear Center Ass'y ❷ in the post ❻ on Main Base.
5) Push down the Lever Up Down Ass'y ❶ for locking of the Hook ❼.

Note :
1) Take care not to separate and loose the Spring Up Down.
2) When assembling the Gear Center Ass'y, don't push down too much.

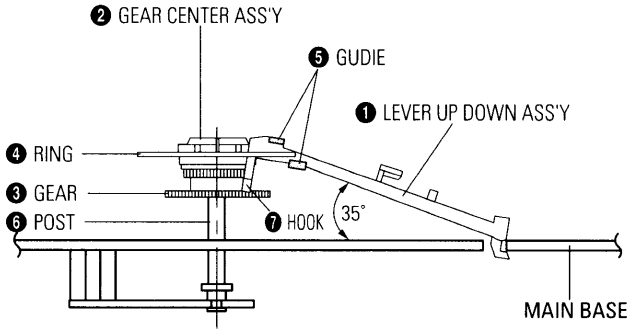


Fig. 4-26 Assembly of Lever Up Down Ass'y, Gear Center Ass'y

4-3-19 Guide Cassette Door Removal

1) Lift the Hook [A].
2) Rotate the Guide Cassette Door ❶ in the direction of arrow.

Note : After reinstalling the Guide Cassette Door ❶ secure the Hook [A].

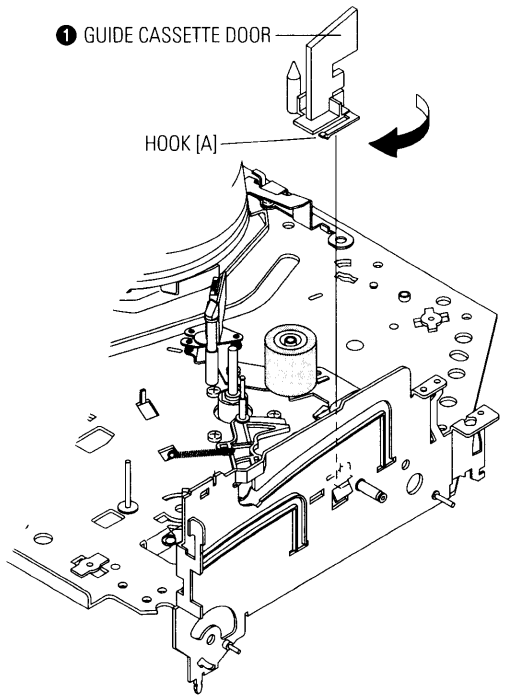


Fig. 4-27 Guide Cassette Door Removal

4-3-20 Unit Pinch Ass'y, Plate Joint, Spring Pinch Drive Removal

1) Lift the Unit Pinch Ass'y ❶.
2) Remove the Plate Joint ❷ from Lever Pinch Drive.
3) Remove the Spring Pinch Drive ❸.

Note :
1) Take extreme care not to touch the grease on the Roller Pinch.
2) When reinstalling, be sure to apply grease on the post pinch roller.

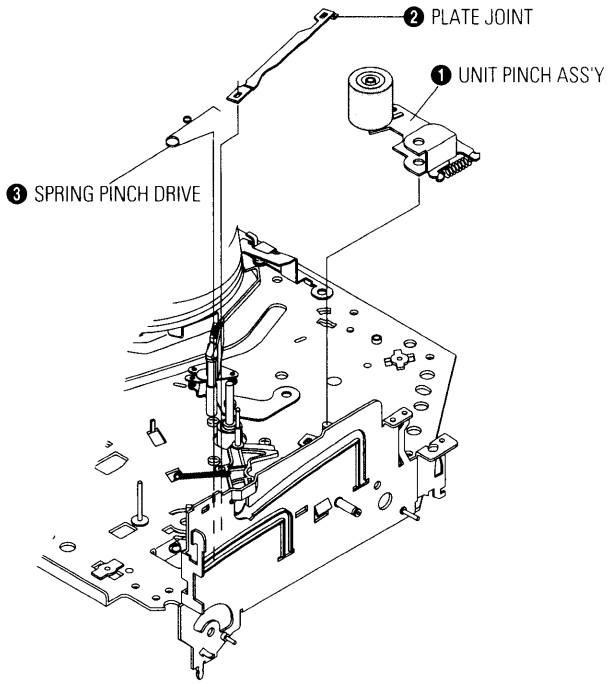


Fig. 4-28 Unit Pinch Ass'y, Plate Joint, Spring Pinch Drive Removal

4-3-21 Lever #9 Guide Ass'y Removal

1) Remove the Spring #9 Guide ❶.
2) Lift the Lever #9 Guide Ass'y ❷ in the direction of arrow.

Note :
1) Take extreme care not to touch the grease on the tape Guide Post.
2) After reinstalling, check the bottom side of the Post #9 Guide to stick to the top side of Main Base.

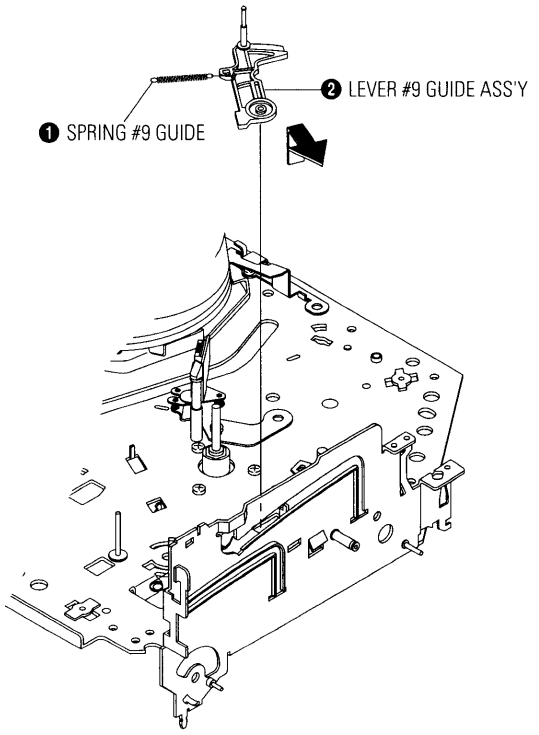


Fig. 4-29 Lever #9 Guide Ass'y Removal

4-3-22 FE Head Removal

1) Remove the screw ❶.
2) Lift the FE Head ❷.

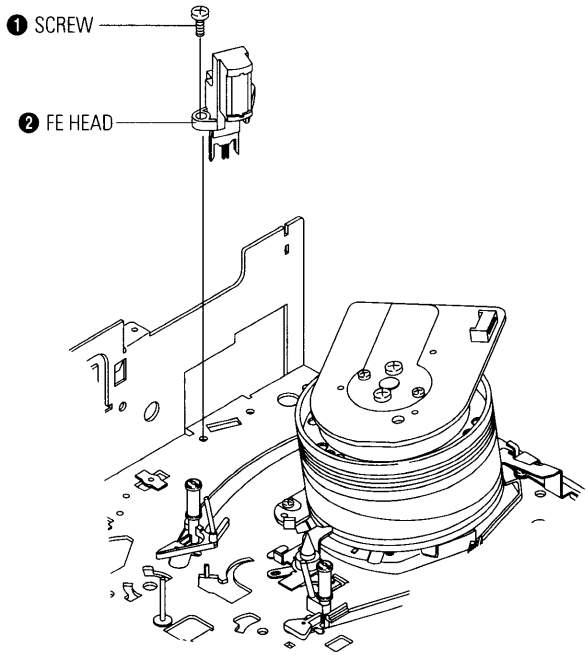


Fig. 4-30 FE Head Removal

4-3-23 ACE Head Removal

1) Pull out the FPC from connector of ACE Head Ass'y ❷.
2) Remove the screw ❶.
3) Lift the ACE Head Ass'y ❷.

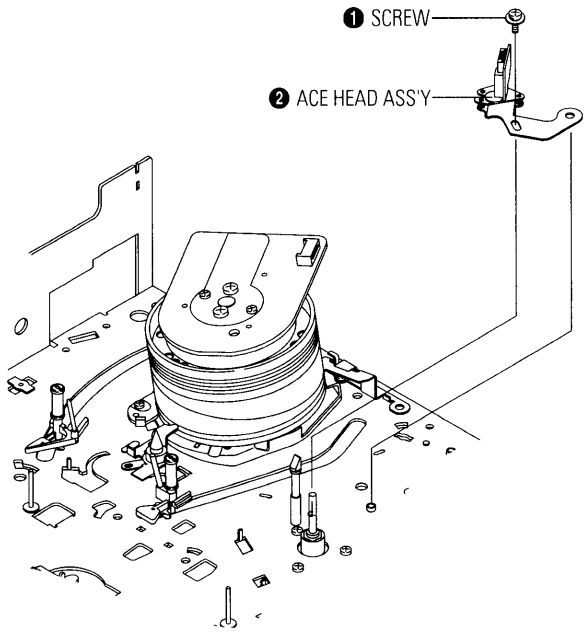


Fig. 4-31 ACE Head Removal

4-3-24 Slider S, T Ass'y Removal

1) Move the Slider S, T Ass'y ❶, ❷ to slot, and then lift it to remove. (Refer to arrow)

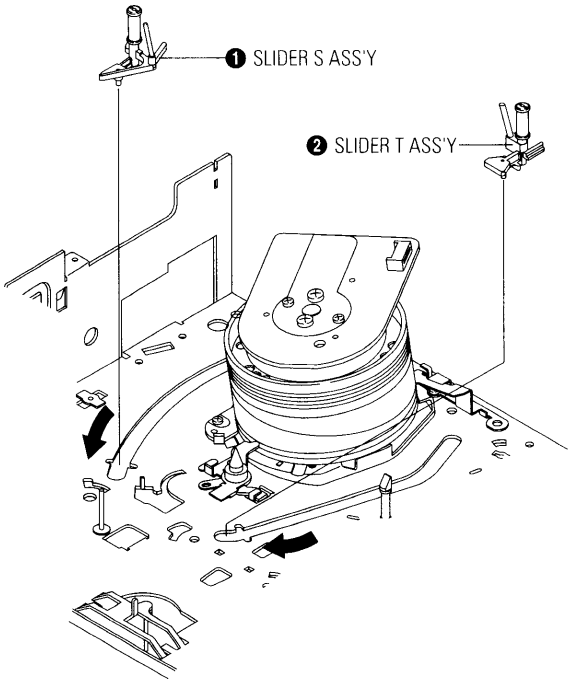


Fig. 4-32 Slider S, T Ass'y Removal

4-3-25 Cylinder Ass'y Removal

1) Remove the 3 Screws ❶, ❸, ❺.
2) Remove the Plate Cylinder A, B, C ❷, ❹, ❻ in the direction of arrow.
3) Lift the Cylinder Ass'y ❼.

Note :
1) When reinstalling, push the Plate Cylinder A, B ❹, ❻ in the reverse of arrow and then, tighten the 2 Screws ❸, ❺.
2) Take care not to touch the Cylinder Ass'y and the tape guide post at reinstalling Plate Cylinder C ❷.
3) Take care not to touch the Cylinder Ass'y with screw driver at reinstalling the Plate Cylinder C ❷.

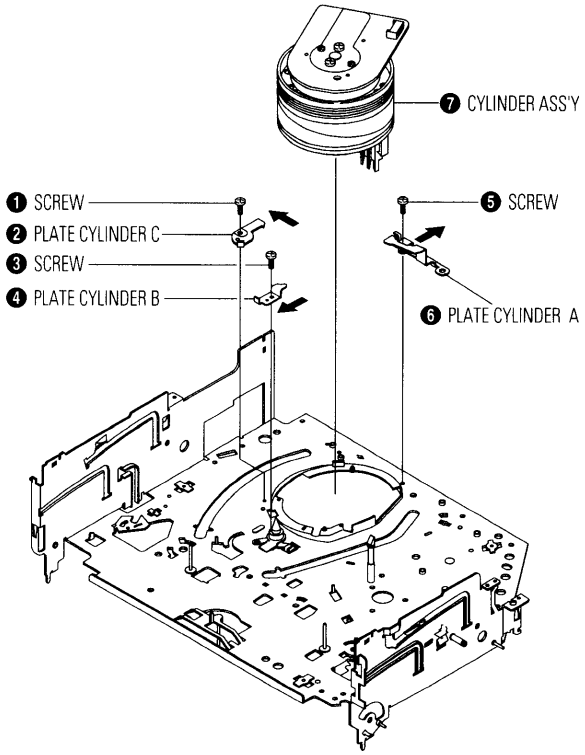


Fig. 4-33 Cylinder Ass'y Removal

4-3-26 Belt Pulley Removal

1) Remove the Belt Pulley ❶.

Note : Take extreme care not to touch the grease on Belt Pulley ❶ at assembling or reassembling.

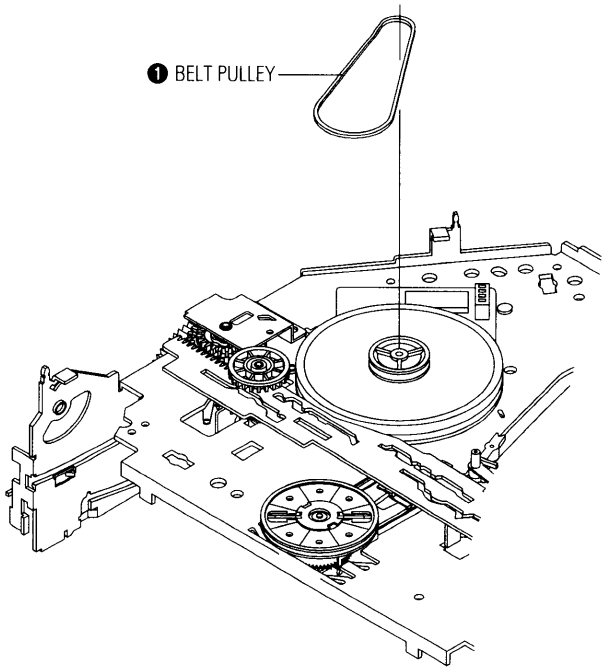


Fig. 4-34 Belt Pulley Removal

4-3-27 Lever Head Cleaner Ass'y Removal

1) Release the Hook ❶.
2) Lift the Lever Head Cleaner Ass'y ❷.

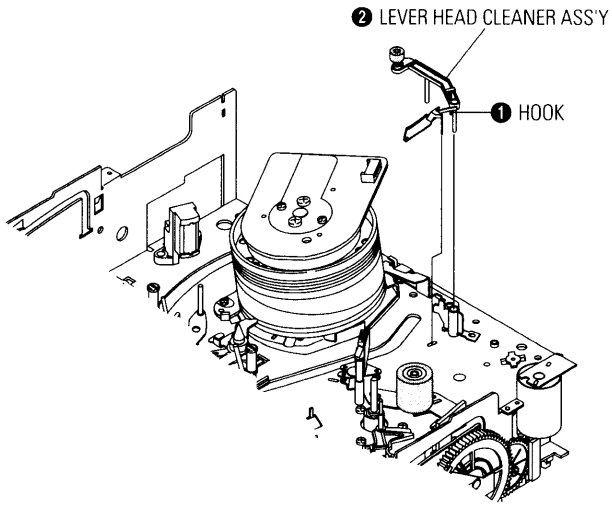


Fig. 4-35 Lever Head Cleaner Ass'y Removal

4-3-28 Motor Capstan Ass'y Removal

1) Remove the 3 Screws ❶.
2) Remove the Motor Capstan Ass'y ❷.

Assembly :

1) Match the 3 holes of Motor Capstan Ass'y ❷ to the 3 holes of Main Base as attending not to drop or knock the Motor Capstan Ass'y.
2) Tighten the 3 Screws in the direction of arrow as shown detail drawing.

Note :

1) Don't reuse the removed screws from Motor Capstan Ass'y.
2) After tightening screws, check if there is gap between the head of screws and the top side of Main Base. There should have no gap between the head of screws and the top side of Main Base.
3) After reinstalling, adjusting the tape transport system again.

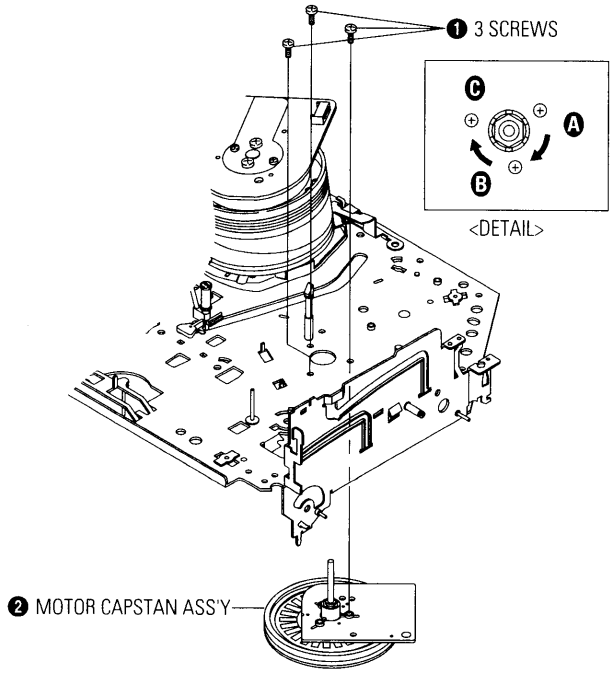


Fig. 4-36 Motor Capstan Ass'y Removal

4-3-29 How to Eject the Cassette Tape (If the unit does not operate on condition that is inserted into housing ass'y)

1) Remove the Holder worm ❶ and the Gear Worm ❷.
2) Turn the Gear Worm Wheel ❸ counterclockwise with screw driver. (Refer to arrow)

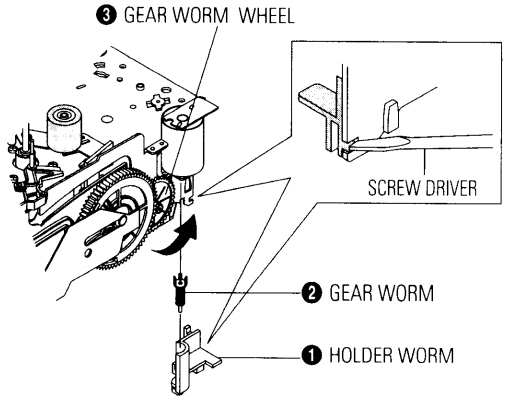


Fig. 4-37

3) When Slider S, T are approached in the position of unloading, rotate holder Clutch counterclockwise after inserting screw driver in the hole of frame's bottom in order to wind the unwounded tape. (Refer to Fig. 4-38)
(If you rotate Gear Worm Wheel continuously when tape is in state of unwinding, you may cause a tape contamination by grease and tape damage. Be sure to wind the unwounded tape in the state of set horizontally.)
4) Rotate Gear Worm Wheel ❸ counterclockwise using screw driver again up to the state of eject mode and then pick out the tape. (Refer to Fig. 4-36)

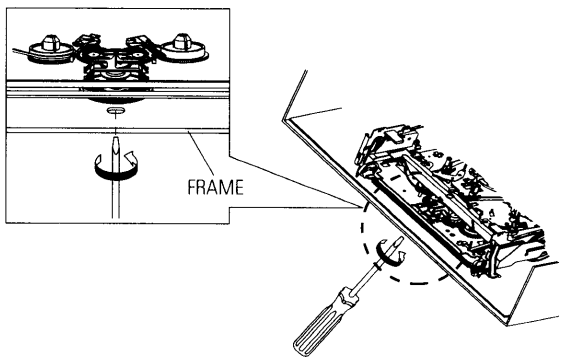


Fig. 4-38

4-4 The table of clearing, Lubrication and replacement time about principal parts

1) Table 4-1 is for normal temperature and humidity.
   It is necessary to check more frequently under extreme conditions.
2) The life of the cylinder assembly depends on the operating conditions.
3) See exploded view for location of each parts.

<Table 4-1>

*	Parts Name	Checking Period										Remark
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
TAPE PATH SYSTEM	POST TENSION	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	- To clean the parts, use patch and alcohol (solvent). - After cleaning, use the video tape after alcohol is gone away completely. - We recommend to use oil [EP-56] or solvent. - One or two drops of oil should be applied after cleaning with alcohol.
	SLANT POST S, T	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#8 GUIDE SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	CAPSTAN SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#9 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#3 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	GUIDE ROLLER S, T	Δ	Δ	Δ	O	O	O	O	O	O	O	
	CYLINDER ASS'Y	Δ	O	O	O	O	O	O	O	O	O	
	FE HEAD	Δ	Δ	Δ	O	O	O	O	O	O	O	
	ACE HEAD	Δ	O	O	O	O	O	O	O	O	O	
	PINCH ROLLER	Δ	O	O	O	O	O	O	O	O	O	
	POST REEL S, T		◆		◆		◆		◆		◆	- Periodic time of applying oil (Apply oil after cleaning) - The excessive applying oil may be the cause of malfunction.
	SLEEVE TENSION		◆		◆		◆		◆		◆	
	POST CENTER		◆		◆		◆		◆		◆	
	LEVER IDLE BOSS (2Point)		◆		◆		◆		◆		◆	
DRIVING SYSTEM	CAPSTAN MOTOR PULLEY	Δ	Δ	Δ	Δ	Δ	O	O	O	O	O	
	BELT PULLEY				O	O	O	O	O	O	O	
	HOLDER CLUTCH ASS'Y	Δ	O	O	O	O	O	O	O	O	O	
	GEAR CENTER ASS'Y		O	O	O	O	O	O	O	O	O	
	GEAR IDLE (2Point)		O	O	O	O	O	O	O	O	O	
	LOADING MOTOR		O	O	O	O	O	O	O	O	O	
BRAKE SYSTEM	BAND BRAKE ASS'Y		O	O	O	O	O	O	O	O	O	
	BRAKE T ASS'Y		O	O	O	O	O	O	O	O	O	

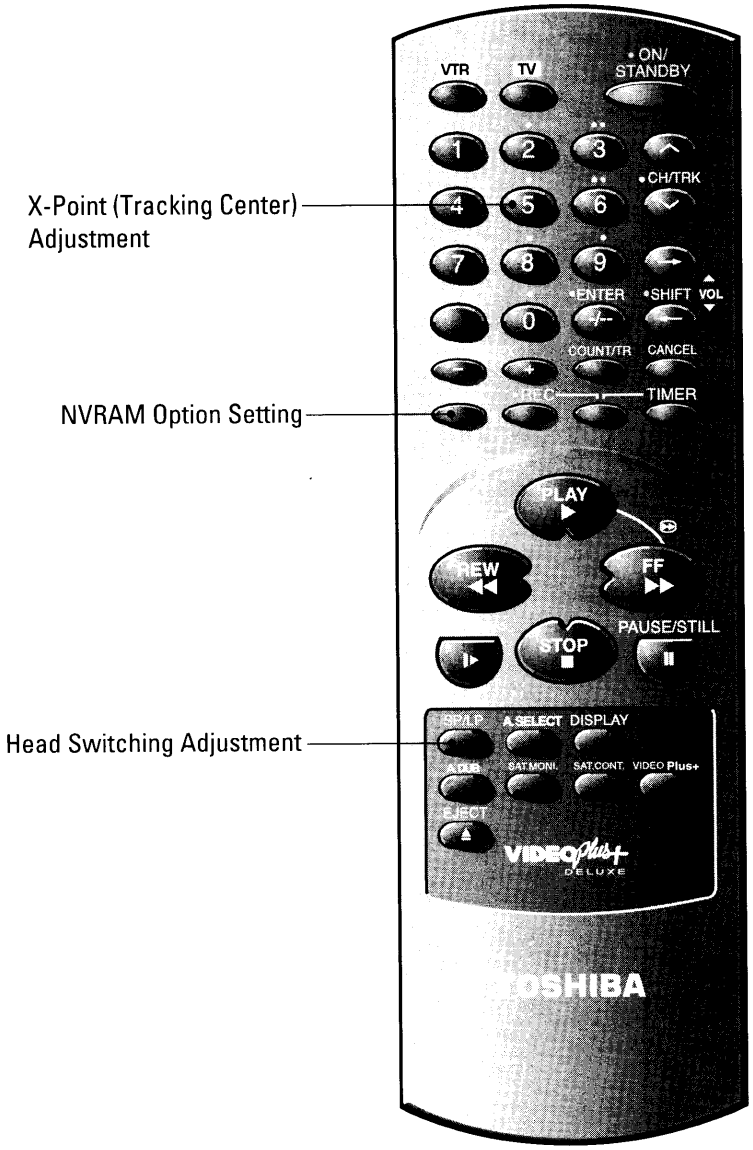
Δ : Cleaning O : Check and replacement in necessary ◆ : Add Oil

5. Alignment and Adjustment

5-1 Reference

1) X-Point (Tracking center) adjustment, "Head switching adjustment" and "NVRAM option setting" can be adjusted with remote control.
2) When replacing the Micom (IC601) and NVRAM (IC605 ; EEPROM) be sure to adjust the "Head switching adjustment" and "NVRAM option setting".
3) When replacing the cylinder ass'y, be sure to adjust the "X-Point" and "Head switching adjustment".
4) Remote control used for same chassis as a accessory is available for all adjustments.
5) How to adjustment.
   - Press the "SW701 (TEST)" button on Main PCB to set the adjustment mode.
   - If the corresponding adjustment button is pressed, the adjustment is performed automatically.
   - If the adjustment is completed, be sure to turn the power off.

5-1-1 Location of adjustment button of remote control



<This remote control is using the for V-730UK.>

Fig. 5-1

5-1-2 SW701 (TEST) location for adjustment mode setting

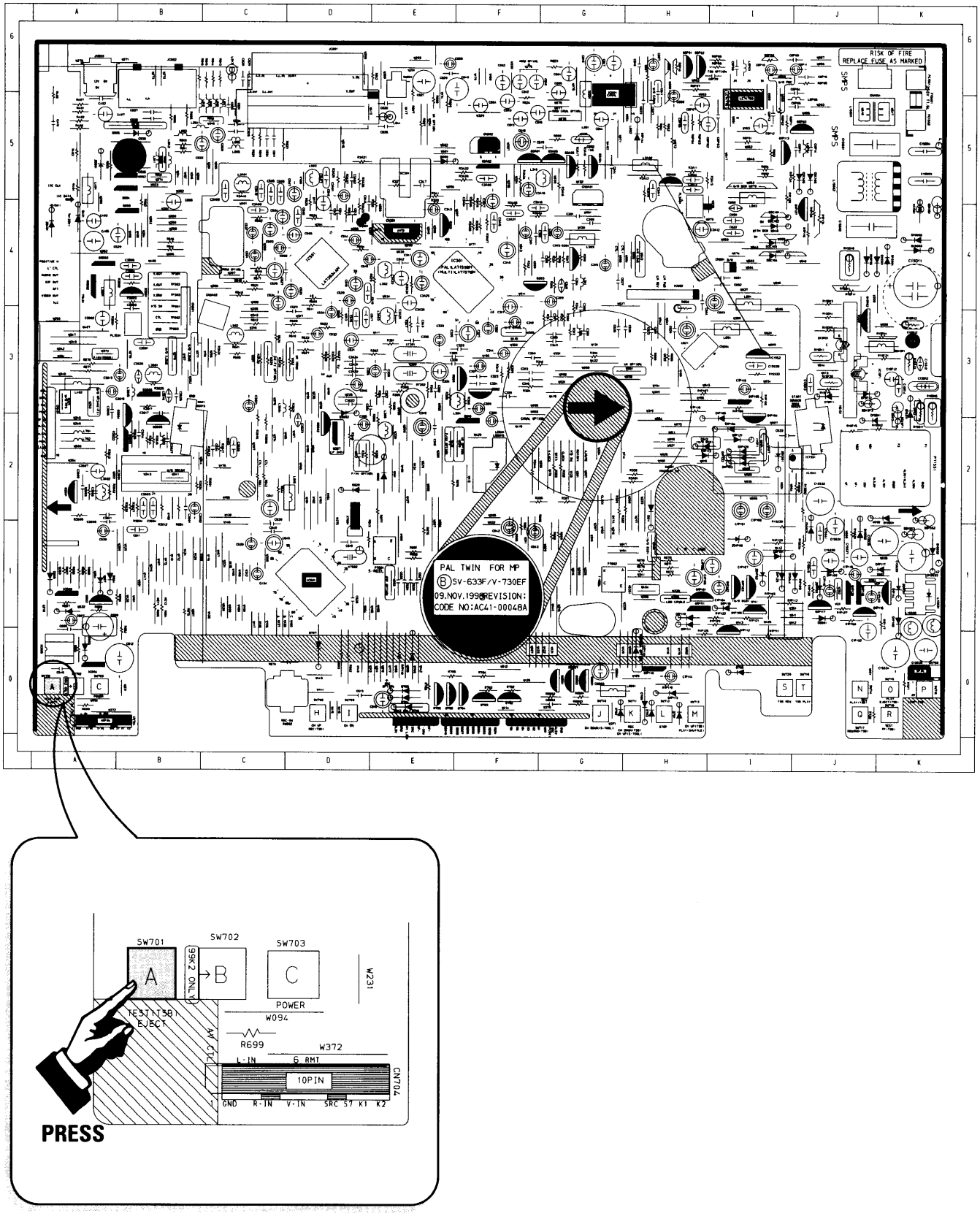


Fig. 5-2 Main PCB (Top View)

5-2 Mechanical Adjustment

5-2-1 Tape Transport System and Adjustment Locations

The tape transport system has been adjusted precisely in the factory. Alignment is not necessary except for the following :
1) Noise observed on the screen.
2) Tape damage.
3) Parts replacement in the tape transport system.

Lower flange height of tape guide is used as the reference for the transport adjustment.
To maintain the height of the tape guide and prevent damage, do not apply excessive force onto the main base.

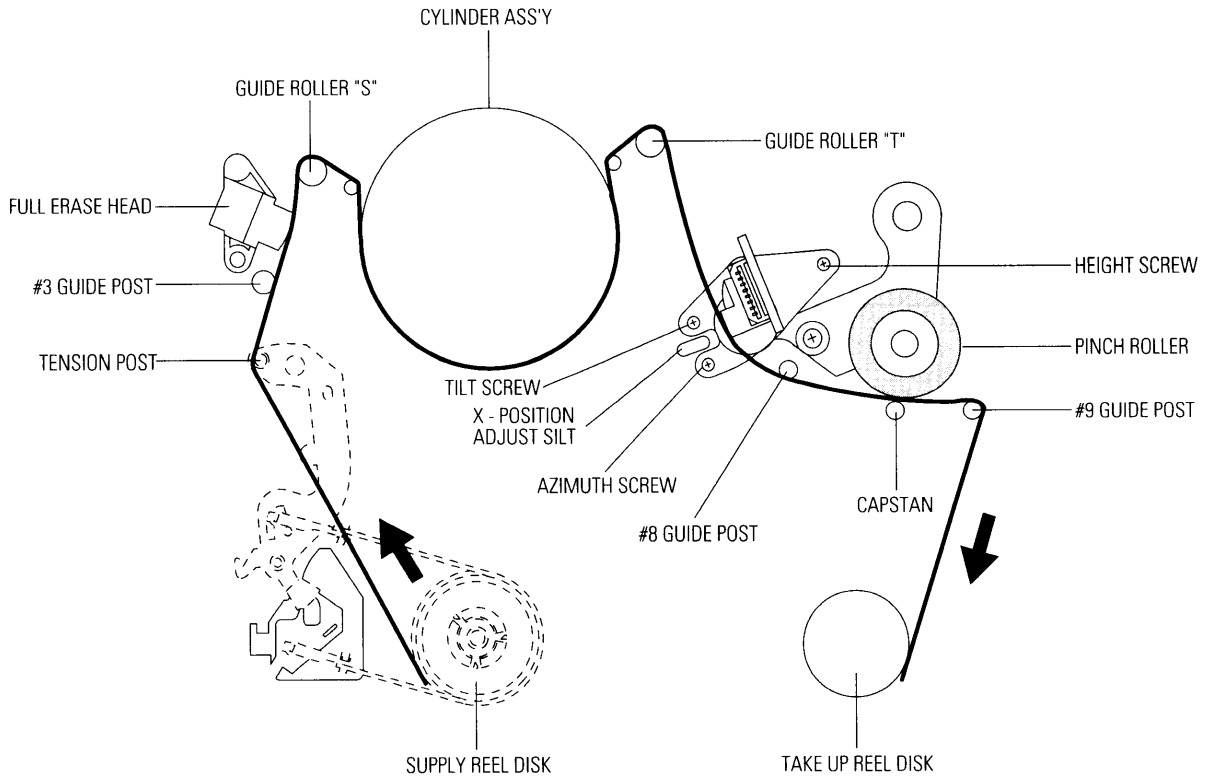


Fig. 5-3 Location of Tape Transport Adjustment

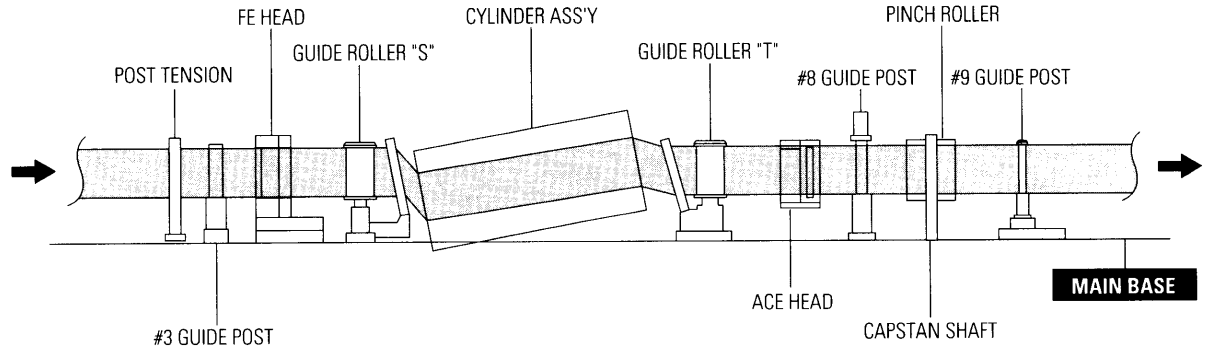


Fig. 5-4 Tape Travel Diagram

5-2-2 Tape Transport System Adjustment

When parts are replaced, perform the required adjustments by referring to procedures for the tape transport system. If there are any changes to the tape path, first run a E-120 tape and make sure excessive tape wrinkle does not occur at the tape guides.

1) If tape wrinkle is observed at the guide roller S, T, turn the guide roller S, T until wrinkle disappears.
2) If the tape wrinkle is still observed at the tape guide, perform the tilt adjustment of the ACE head.

(1) ACE Head Assembly Adjustment

Test point :	TP601 (H'D S/W -Trigger)
	TP602 (Control Pulse)
	TP301 (Video output)
	TP302 (Audio output)
	TP303 (Envelope)
Test tape :	ST-N1
	BLANK TAPE : E-180

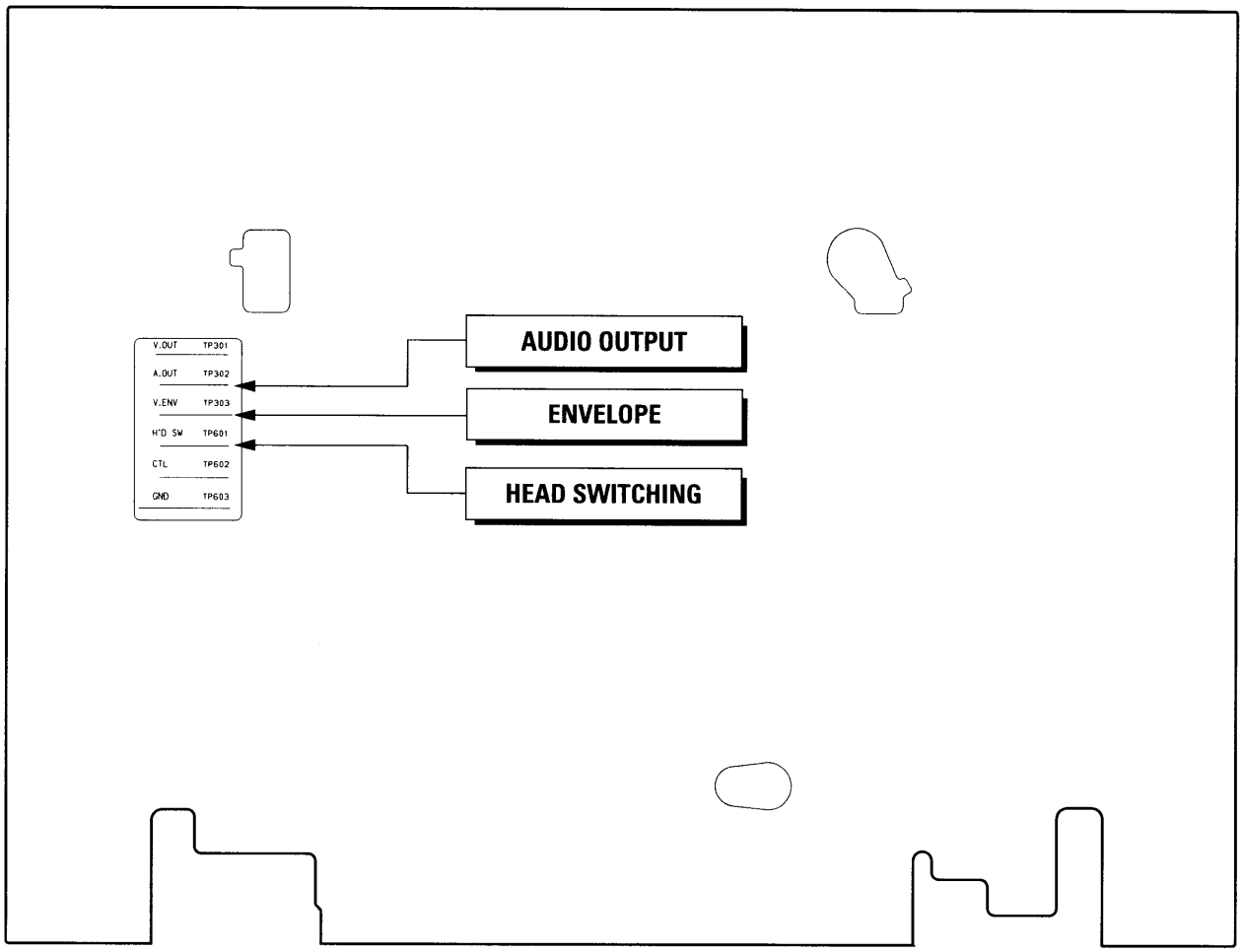


Fig. 5-5 Location of Test point (Main PCB-Top View)

a. ACE HEAD HEIGHT ADJUSTMENT

1) Run the alignment tape (Color bar) in the playback mode.
2) Observe surface of the audio head using a dental mirror.
3) Turn screw (C) clockwise or counterclockwise until the gap of lower tape edge and the lower edge of the control head is about 0.25mm.
(Refer to Fig. 5-6 and 5-7)

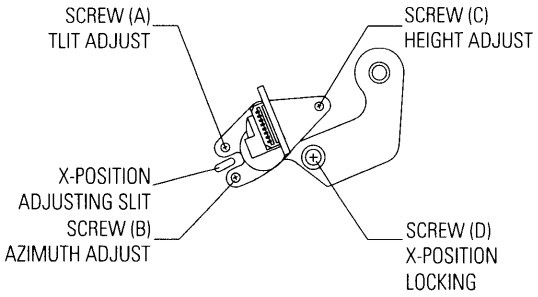


Fig. 5-6 Location of ACE Head Adjustment Screw

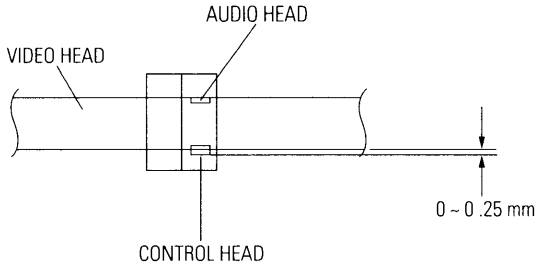


Fig. 5-7 ACE Head Height Adjustment

b. ACE HEAD TILT ADJUSTMENT

1) Playback a blank tape and observe the position of the tape at the lower flange of tape guide.
2) Confirm that there is no curl or wrinkle at the lower flange of tape guide as shown in Fig. 5-8 (B).
3) If a curl or wrinkle of the tape occurs, slightly turn the screw (A) tilt adjust on the ACE head ass'y.
4) Reconfirm the ACE head height.

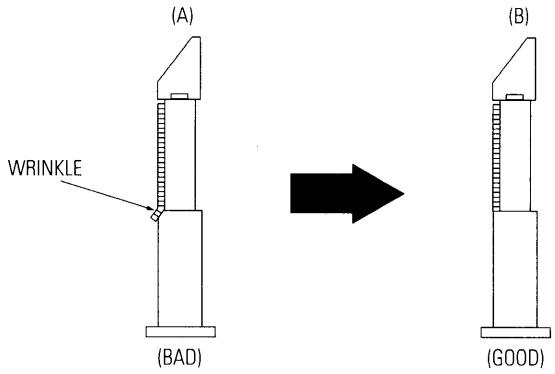


Fig. 5-8 Tape Guide Check

c. AUDIO AZIMUTH ADJUSTMENT

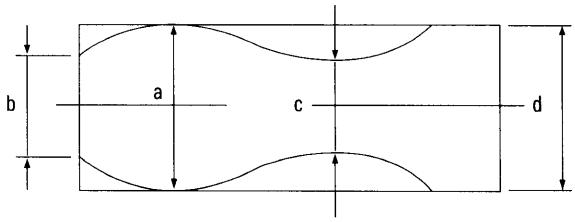
1) Load alignment tape (Mono scope) and playback the NTSC : 7KHz (PAL : 6KHz) signal.
2) Connect channel-1 scope probe to audio output test point (TP302).
3) Adjust screw (B) to achieve maximum audio level. (See Fig. 5-6)

d. ACE HEAD POSITION (X-POINT) ADJUSTMENT

1) Playback the alignment tape (Color bar).
2) Press the "SW701 (TEST)" button on Main PCB to set the adjustment mode. (See Fig. 5-2)
3) Press the "5" button of remote control then adjustment is operated automatically. (See Fig. 5-1)
4) Connect the CH-1 probe to TP303 (Envelope) the CH-2 probe to TP601 (H'D switching pulse) and then trigger to CH-1.
5) Insert the (-) driver into the X-Point adjustment hole and adjust it so that envelope waveform is maximum.
6) Turn the Power off.

(2) Linearity adjustment (Guide roller S, T adjustment)

1) Playback the Mono Scope alignment tape (SP mode).
2) Observe the video envelope signal on an oscilloscope (triggered by the video switching pulse).
3) Make sure the video envelope waveform (at its minimum) meets the specification shown in Fig. 5-9.
   If it does not, adjust as follows :



a b c d
c,b,d/a ≧ 63%

Fig. 5-9 Envelope Waveform Adjustment

Note :
a=Maximum output of the video RF envelope.
b=Minimum output of the video RF envelope at the entrance side.
c=Minimum output of the video RF envelope at the center point.
d=Maximum output of the video RF envelope at the exit side.

4) If the section A in Fig. 5-10 does not meet the specification, adjust the guide roller S up or down.
5) If the section B in Fig. 5-10 does not meet the specification, adjust the guide roller T up or down.

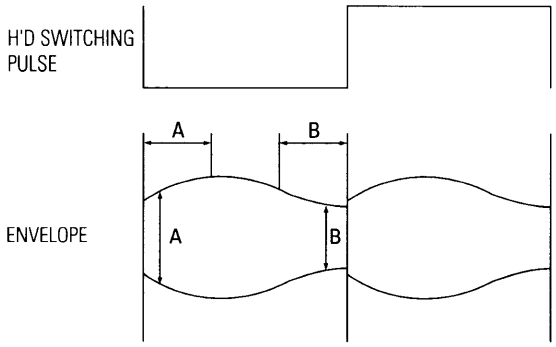


Fig. 5-10 Adjustment Points

6) Play back the Mono Scope alignment tape (SP mode).
7) Connect an oscilloscope CH-1 to the Envelope and CH-2 to the H'D SW Pulse for triggering.
8) Turn the guide roller heads with a flat head (▰) driver to obtain a flat video RF envelope as shown in Fig. 5-11.

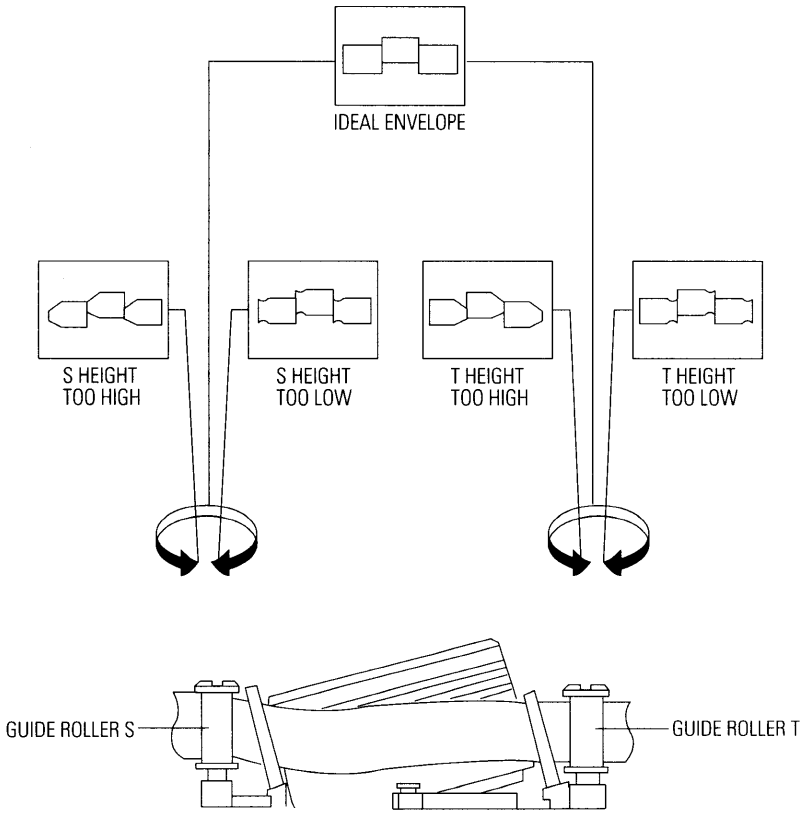


Fig. 5-11 Guide Roller S, T Height Adjustment

(3) Check Transitional Operation from RPS to Play

Check transition from RPS mode to play mode :
Using a pre-recorded SP tape, make sure the entry side of envelope comes to an appropriate steady state within 3 seconds (as shown in Fig. 5-12).
If the envelope waveform does not reach specified peak-to peak amplitude within 3 seconds, adjust as follows :

1) Make sure there is no gap between the supply roller lower flange and the tape.
   If there is a gap, adjust the supply guide roller again.
2) Change operation mode from the RPS to the play mode (again) and make sure the entry side of envelope rises within 3 second.

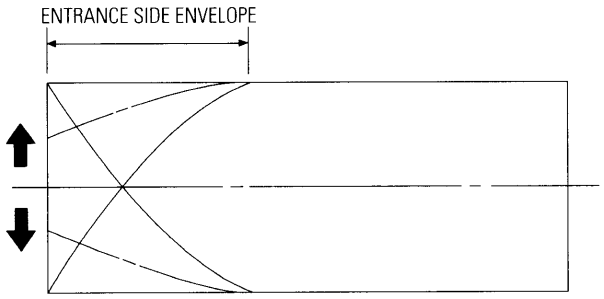


Fig. 5-12 Video Envelope Rising when Operation mode Changes from RPS to Play Mode

(4) Envelope Check

1) Make recordings on T-120 (E-120) and T-160 (E-180) tape.
   Make sure the playback output envelope meets the specification as shown in Fig. 5-13.
2) Play back a self recorded tape (recording made on the unit using with T-120 (E-120).
   The video envelope should meet the specification as shown in Fig. 5-13.
   In SP mode, (A) should equal (B).
   If the head gap is wide, upper cylinder should be checked.

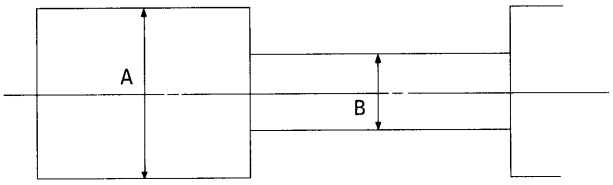


Fig. 5-13 Envelope Output and Output Level

(5) Tape Wrinkle Check

1) Run the T-160 (E-180) tape in the playback, FPS, RPS and Pause modes and observe tape wrinkle at each guide.
2) If excessive tape wrinkle is observed, perform the following adjustments in Playback mode :

- Tape wrinkle at the guide roller S, T section : Linearity adjustment.
- Tape wrinkle at tape guide flange : ACE head assembly coarse adjustment.

5-2-3 Reel Torque

1) The rotation of the capstan motor causes the holder clutch ass'y to rotate through the belt pulley.
2) The spring wrap PLAY/REV of holder clutch ass'y drives the disk reel S, T through gear idle by rotation of gear center ass'y.
3) Brake is operated by slider cam at FF/REW mode.
4) Transportation of accurate driving force is done by gears. (Gear Center Ass'y)

Note : If the spec. does not meet the followings specifications, replace the holder clutch ass'y and then recheck.

<Table 5-1>

MODE	TORQUE g/cm		GAUGE
PB	NTSC	82.5 ± 27.5	Cassette Torquemeter
	PAL	79 ± 27	
RPS	145 ± 30		Cassette Torquemeter

5-2-4 Location adjustment and Confirmation of Tension Post

1) Remove the holder cassette ass'y and then push the lever FL Arm-R to the direction of loading.
2) Push the lever tension drive ❶ in the direction of arrow. (See Fig. 5-14)
3) Turn the gear worm wheel ❷ clockwise so that "Timing Point" of the slider FL drive ❸ and gear FL cam ❹ can be aligned (See Fig. 5-15)

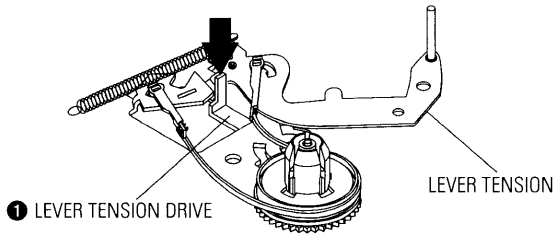


Fig. 5-14

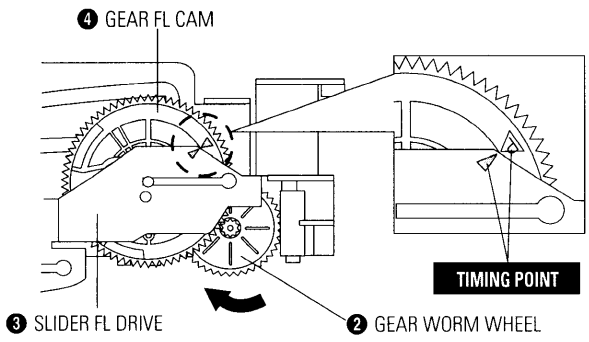


Fig. 5-15

4) As rotating Disk S Reel ❶ clockwise and the region of adjusting in the Main Base (in shape of slit) clockwise or counterclockwise after inserting screw driver in the slit on Main Base. Adjust the left end edge of Lever Tension Ass'y ❸ to 1.3 +1.5/-0.5mm from the location of mark in the Main Base.
5) As rotating Disk S Reel ❶, double-check the location of the left end edge of Lever Tension Ass'y and the quantity of crossing from mark on Main Base. (+1.0/-0.5mm)

Counterclockwise : Torque UP
Clockwise : Torque DOWN

Back Tension should be 56 ± 15g.cm at inspecting it with Back Tension Meter.

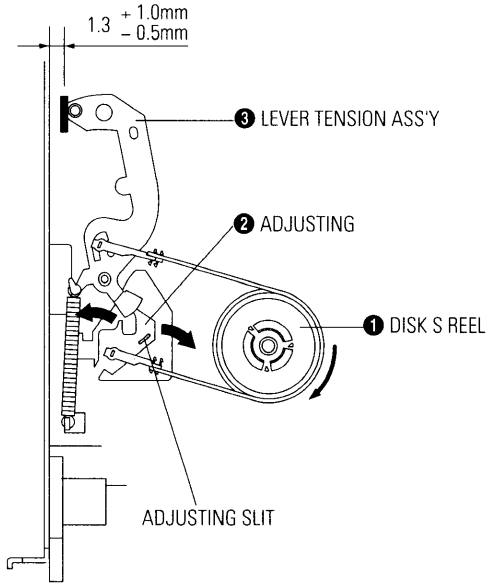


Fig. 5-16 Tension Pole and Back Tension Adjustment

Note :
1) Mark on Main Base is located in about 1.3mm from inside of bending line.
2) Be careful not to deform the region of adjusting on Main Base up and down at adjusting.

5-3 Head Switching Point Adjustment

1) Playback the alignment tape.
2) Press the "SW701 (TEST)" button on Main PCB to set the adjustment mode. (See Fig. 5-2)
3) Press the "SP/SLP" button of remote control then adjustment is operated automatically. (See Fig. 5-1)
4) Turn the Power off.

5-4 NVRAM Option Setting

1) NVRAM Option is adjusted at production line basically.
2) In case Micom (IC601) and NVRAM (IC605 ; EEPROM) is replaced, be sure to set the corresponding option number of the repaired model. (If the option is not set, the unit is not operated.)

1) Press the "SW701 (TEST)" button on Main PCB to set the adjustment mode. (See Fig. 5-2)
2) Press the "MENU (OSP)" button on the remote control about 5 seconds then option setting display is appeared. (See Fig. 5-17)
3) Select the option number (See Table 5-2) of corresponding model with "SHIFT ⊕⊖ " button on the remote control.
4) If selecting the option number is completed, press the "CH/TRK (PROG.TV) ⊙ " button of remote control. (If "CH/TRK (PROG.TV) ⊙ " button is pressed, the selected number is changes reversed color. ; See Fig. 5-17)
5) Press the "ENTER (ENTRER)" button of remote control again to store the option number. ("SAVE" is displayed for a second as shown Fig. 5-18 and this setting is completed.)
6) Turn the Power off.

<Table 5-2>

MODELS	OPTION NUMBER
V-730EF	2, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 18, 19, 21, 22, 23, 24, 25, 29, 33, 36, 40, 44, 46, 48
V-610EF	2, 4, 5, 7, 8, 9, 12, 13, 14, 15, 16, 18, 19, 21, 22, 23, 24, 25, 29, 34, 36, 40, 44, 46, 48
V-510EF	5, 8, 9, 12, 13, 14, 15, 18, 19, 21, 22, 23, 25, 29, 34, 36, 39, 40, 44, 46, 48
V-430EF	2, 5, 6, 7, 8, 9, 12, 16, 18, 19, 22, 24, 25, 29, 33, 36, 40, 46, 48
V-230EF	2, 5, 6, 7, 9, 16, 18, 19, 22, 24, 25, 29, 33, 40, 46, 48
V-220EF	2, 5, 9, 18, 19, 22, 25, 29, 34, 39, 40, 46, 48
V-730UK	3, 4, 5, 6, 7, 8, 12, 13, 15, 21, 22, 23, 24, 33, 36, 40, 44, 46, 48
V-720UK/710UK	3, 5, 7, 8, 12, 13, 15, 21, 22, 23, 24, 34, 36, 39, 40, 44, 46, 48
V-430UK	3, 4, 5, 7, 8, 12, 22, 23, 24, 33, 36, 37, 46, 48
V-230UK	3, 4, 5, 7, 8, 22, 23, 24, 33, 36, 37, 46, 48
V-220UK	3, 4, 5, 7, 8, 22, 23, 24, 33, 36, 37, 46, 48
V-210UK	3, 8, 22, 34, 36, 46
V-740EG/730EG	2, 4, 5, 6, 7, 8, 10, 12, 13, 14, 15, 16, 18, 21, 22, 23, 24, 26, 30, 33, 36, 40, 44, 46, 48
V-430EG	2, 4, 5, 7, 8, 10, 12, 16, 18, 22, 23, 24, 26, 30, 33, 36, 37, 46, 48
V-230EG	2, 4, 5, 7, 8, 10, 16, 18, 22, 23, 24, 26, 30, 33, 36, 37, 46, 48
V-210EG	5, 7, 8, 10, 16, 18, 22, 26, 30, 34, 36, 46, 48
V-720W	5, 6, 8, 10, 12, 13, 14, 15, 18, 21, 22, 23, 26, 29, 30, 34, 36, 40, 44, 46, 48
V-710W	5, 6, 8, 10, 12, 13, 14, 15, 18, 21, 22, 23, 26, 29, 30, 34, 36, 40, 44, 46, 48
V-420W	5, 6, 8, 10, 12, 18, 22, 26, 29, 30, 34, 36, 37, 46, 48
V-410W	5, 6, 8, 10, 12, 18, 22, 26, 29, 30, 34, 36, 37, 46, 48
V-220W	6, 8, 10, 17, 18, 22, 26, 29, 30, 34, 36, 37, 46, 48
V-210W	6, 8, 10, 17, 18, 22, 26, 29, 30, 34, 36, 37, 46, 48

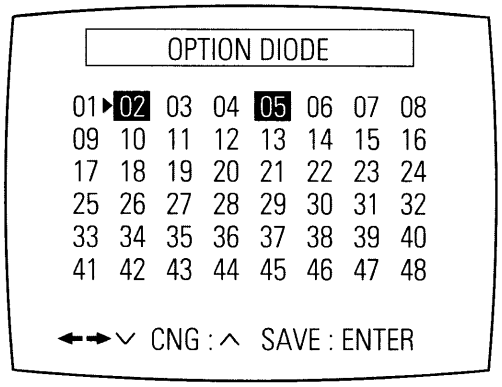


Fig. 5-17

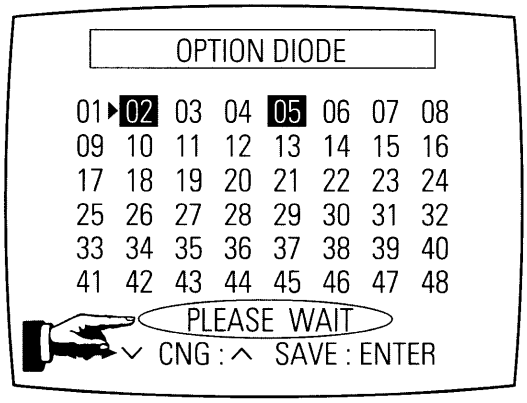


Fig. 5-18

6. Exploded View

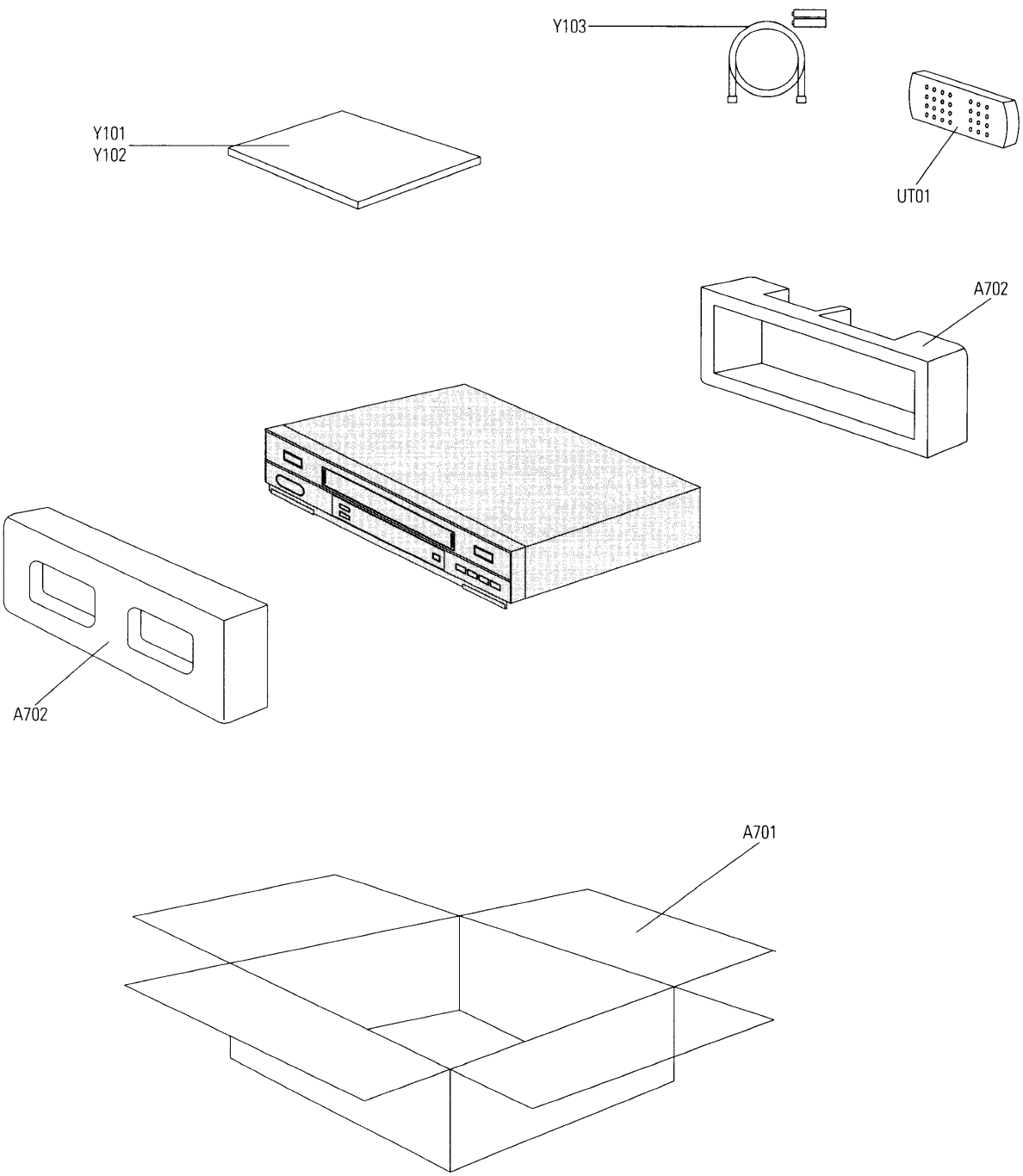
6-1 Packing Assembly - 6-2

6-2 Instrument Assembly - 6-3

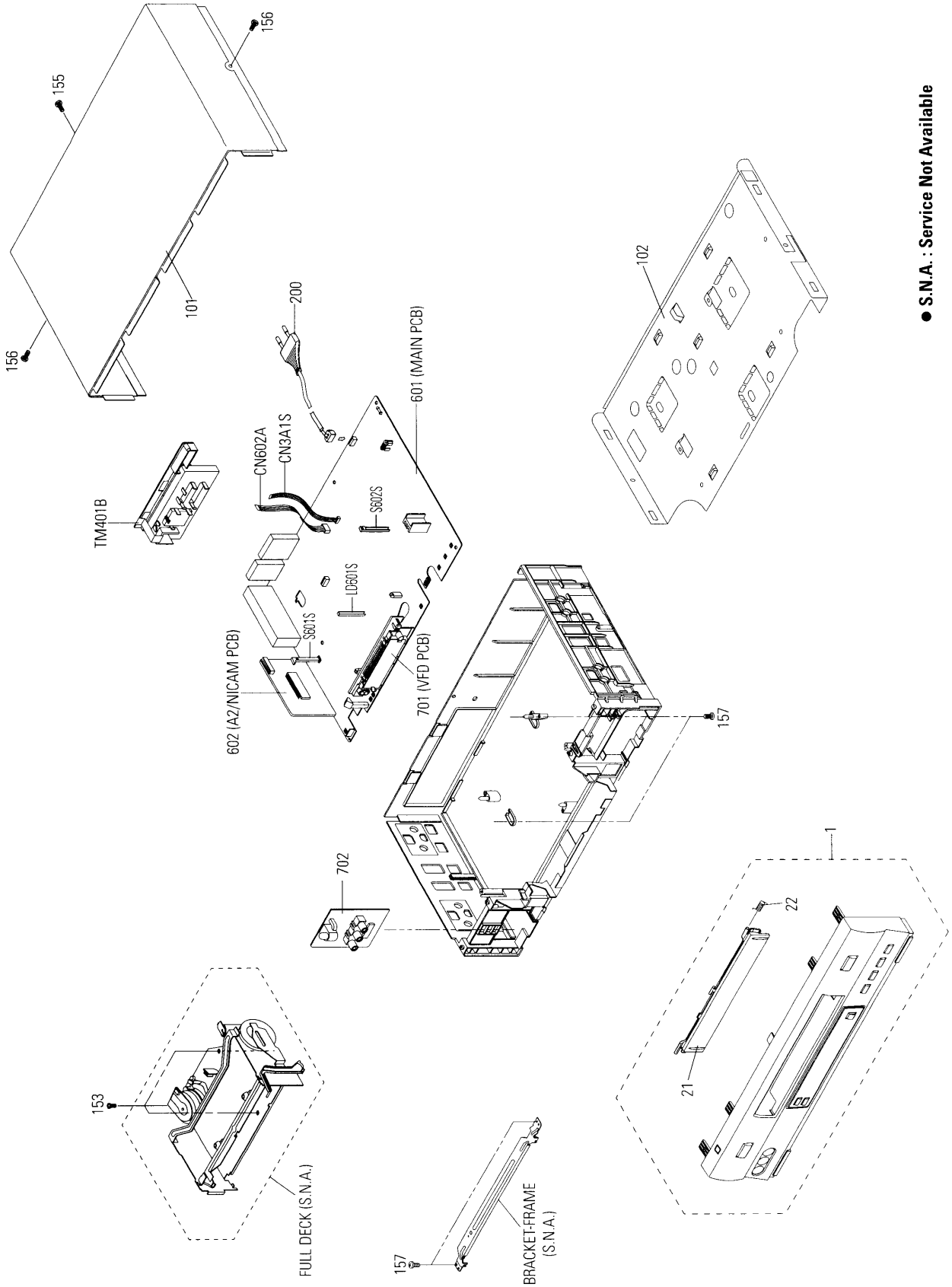
6-3 Mechanical Parts (Top Side) - 6-4

6-4 Mechanical Parts (Bottom Side) - 6-5

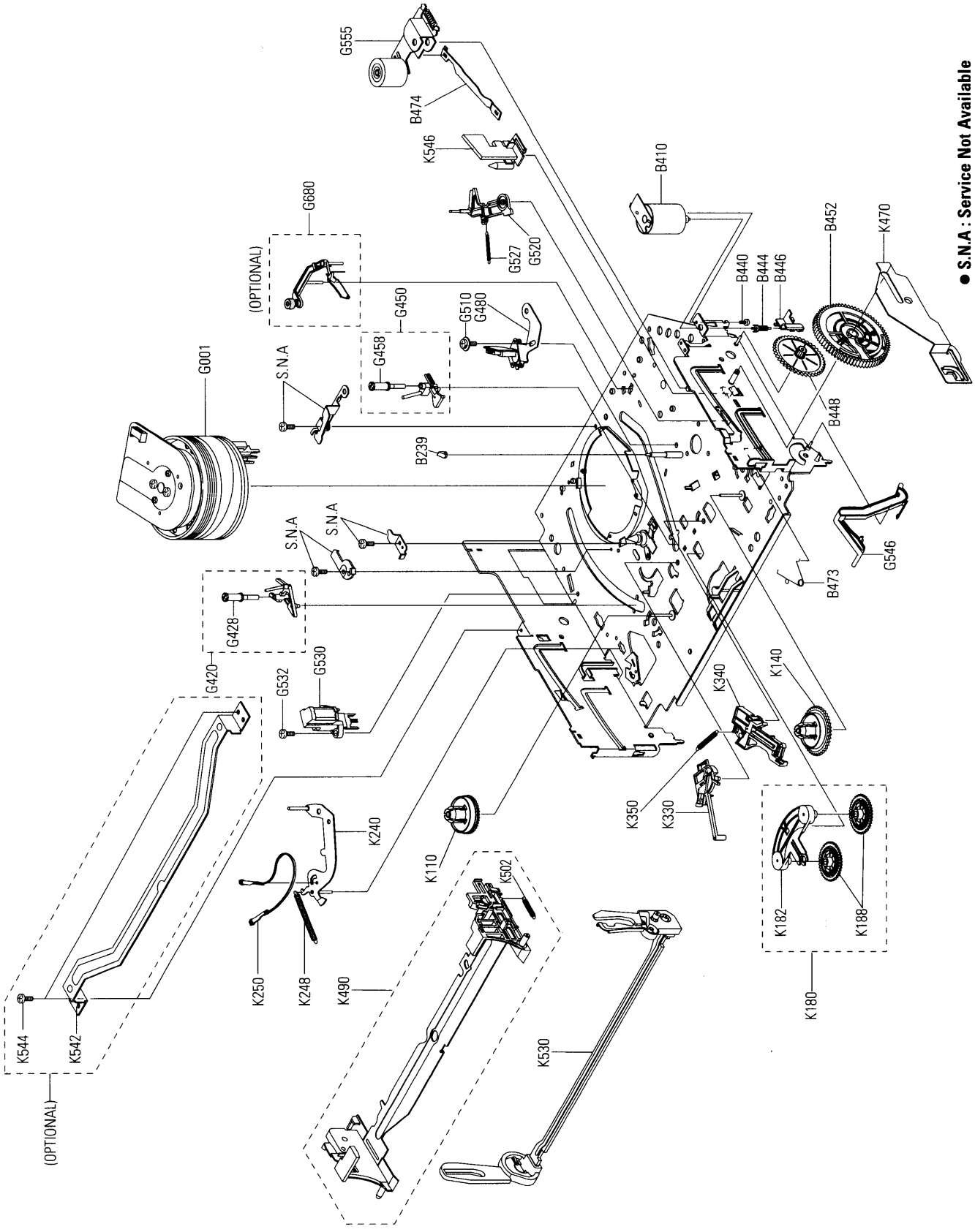
6-1 Packing Assembly



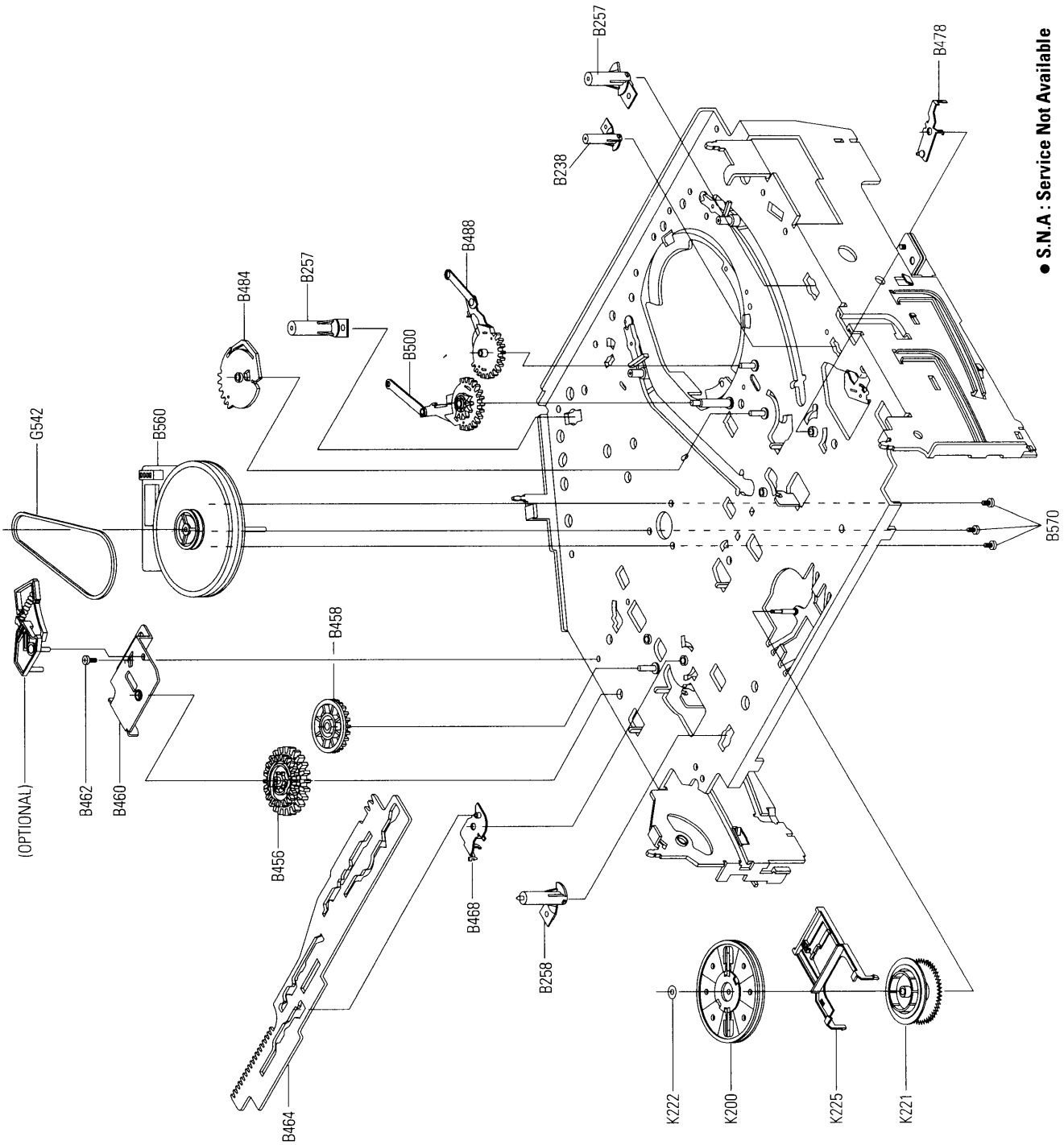
6-2 Instrument Assembly



6-3 Mechanical Parts (Top Side)



6-4 Mechanical Parts (Bottom Side)



7. Replacement Parts List

7-1 Hi-Fi Models (V-730EF/610EF/510EF/730UK/720UK/710UK/740EG/730EG/720W/710W)

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
- PACKING PARTS -				
A701	BY730492	AC69-00067A	PACKING-CASE;V-730F,-,-,-,-,SW2+YEL,-,-,	V-730EF
	BY730466	AC69-00067B	PACKING-CASE;V-610EF,-,-,-,-,SW2+YEL,-,-	V-610EF
	BY730521	AC69-00067C	PACKING-CASE;V-510EF,-,-,-,-,SW2+YEL,-,-	V-510EF
	BY730522	AC69-00067H	PACKING-CASE;V-730UK,-,-,-,-,SW2+YEL,-,-	V-730UK
	BY730523	AC69-00067U	PACKING CASE;V-720UK,SW2,-,-,-,YEL,-,-,-	V-720UK
	BY730524	AC69-00067J	PACKING-CASE;V-710UK,-,-,-,-,SW2+YEL,-,-	V-710UK
	BY730525	AC69-00067K	PACKING-CASE;V-740EG,-,-,-,-,SW2+YEL,-,-	V-740EG
	BY730526	AC69-00067L	PACKING-CASE;V-730EG,-,-,-,-,SW2+YEL,-,-	V-730EG
	BY730527	AC69-00067V	PACKING CASE;V-720W,SW2,-,-,-,YEL,-,-,-,	V-720W
	BY730528	AC69-00067G	PACKING-CASE;V-710W,-,-,-,-,SW2+YEL,-,-,	V-710W
A702	BY730464	AC69-00041A	CUSHION-F/B;M-656/TSB,EPS,-,-,-,-,-	ALL Models
UT01	BY634283	AC59-00015J	REMOCON-ASSY;-,VT-730EF(70148444),-,-,V-	V-730EF
	BY634276	AC59-00015K	REMOCON-ASSY;-,VT-610EF(70148445),-,-,V-	V-610EF
	BY634290	AC59-00015L	REMOCON-ASSY;-,VT-510EF(70148446),-,-,V-	V-510EF
	BY634291	AC59-00015A	REMOCON-ASSY;-,VT-730UK(70148439),-,-,V-	V-730UK
	BY634292	AC59-00015B	REMOCON-ASSY;-,VT-710UK(70148440),-,-,V-	V-720UK/710UK
	BY634293	AC59-00015F	REMOCON-ASSY;-,VT-730EG(70148436),-,-,V-	V-740EG/730EG
	BY634294	AC59-00015P	REMOCON-ASSY;-,VT-710W(70148449),-,-,V-7	V-720W/710W
Y101	BY634282	AC68-00639A	MANUAL USERS;V-730EF/TSB,-,-,-,-,-,-,-,-	V-730EF
	BY634280	AC68-00640A	MANUAL USERS;V-610EF/TSB,-,-,-,-,-,-,-,-	V-610EF
	BY634295	AC68-00641A	MANUAL USERS;V-510EF/TSB,-,-,-,-,-,-,-,-	V-510EF
	BY634296	AC68-00648A	MANUAL USERS;V-730UK/TSB,-,-,-,-,-,-,-,-	V-730UK
	BY634297	AC68-00649A	MANUAL USERS;V-710UK/TSB,-,-,-,-,-,-,-,-	V-720UK/710UK
	BY634298	AC68-00654A	MANUAL USERS;V-740EG/TSB,-,-,-,-,-,-,-,-	V-740EG
	BY634298	AC68-00654A	MANUAL USERS;V-740EG/TSB,-,-,-,-,-,-,-,-	V-730EG
	BY634300	AC68-00660A	MANUAL USERS;V-710W/TSB,ENG+ITA,-,-,-,-	V-720W/710W
Y102	BY634302	AC68-00663A	MANUAL USERS;V-710W/TSB,RUSIA+SPA,-,-,-,-	V-710W
Y103	BY634253	AC39-00017A	CABLE-ETC-RF(PAL);-,MALE/FEMALE,1200MM,R	ALL Models
- INSTRUMENT PARTS -				
1	BY730496	AC97-00491A	ASSY-PANEL FRONT;V-730EG ,HIPS 94HB,-	V-730EF
	BY730469	AC97-00520A	ASSY-PANEL FRONT;V-610EF,HIPS 94HB,-	V-610EF
	BY730529	AC97-00521A	ASSY-PANEL FRONT;V-510EF,HIPS 94HB,-	V-510EF
	BY730530	AC97-00522A	ASSY-PANEL FRONT;V-730UK,HIPS 94HB,-	V-730UK
	BY730531	AC97-00763A	ASSY-PANEL FRONT;V-720UK,HIPS 94HB,-	V-720UK
	BY730532	AC97-00523A	ASSY-PANEL FRONT;V-710UK,HIPS 94HB,-	V-710UK
	BY730533	AC97-00755A	ASSY-PANEL FRONT;V-740EG,HIPS 94HB,-	V-740EG
	BY730534	AC97-00524A	ASSY-PANEL FRONT;V-730EG,HIPS 94HB,-	V-730EG
	BY730535	AC97-01025A	ASSY-PANEL FRONT;HIPS 94HB,V-720W/TSB,-	V-720W
	BY730536	AC97-00525A	ASSY-PANEL FRONT;V-710W,HIPS 94HB,-	V-710W
21	BY730484	AC64-00135A	DOOR-CASSETTE;-,ABS94HB BRN,-,-,-,SILVER	V-730EF
	BY730460	AC64-00135B	DOOR-CASSETTE;-,ABS94HB BLK,-,-,-,8746D/	V-610EF
	BY730537	AC64-00135C	DOOR-CASSETTE;-,ABS94HB BROWN,-,-,-,SILV	V-510EF
	BY730538	AC64-00135D	DOOR-CASSETTE;-,ABS94HB BROWN,-,-,-,SILV	V-730UK
	BY730539	AC64-00135U	DOOR-CASSETTE;-,ABS94HB BRN,-,-,-,SILVER	V-720UK
	BY730540	AC64-00135E	DOOR-CASSETTE;-,ABS94HB BROWN,-,-,-,SILV	V-710UK
	BY730541	AC64-00135L	DOOR-CASSETTE;-,ABS94HB BRN,-,-,-,SILVER	V-740EG
	BY730542	AC64-00135F	DOOR-CASSETTE;-,ABS94HB BROWN,-,-,-,SILV	V-730EG
	BY730543	AC64-00135W	DOOR-CASSETTE;-,ABS94HB BRN,-,-,-,BLK,-,	V-720W
	BY730544	AC64-00135G	DOOR-CASSETTE;-,ABS94HB BROWN,-,-,-,SILV	V-710W
22	BY730093	AC61-62032A	SPRING-MASK;X-9,-,SUS,-,4.4,-,SV-C130	ALL Models
101	BY730313	AC64-30899C	CABINET-TOP-ASSY;-,PCM(SECC),-,0.525,380	V-730EF/610EF/510EF/730UK/720UK/740EG
	BY730312	AC64-30899B	CABINET-TOP;V-629G/TSB,PCM MD552,SECC,T0	V-710UK/710W
	BY730314	AC64-30899D	CABINET-TOP-ASSY;-,PCM(SECC),-,0.525,380	V-730EG/720W
102	BY730280	AC63-32128A	COVER-BOTTOM;SV-C140F,SECC,387.7X197.6,T	ALL Models
153	70790218	AC60-12126A	SCREW-BH;-,BH,-,4*12,FE,FZY,-,-,-	ALL Models
155	70790082	AC60-12134A	SCREW-TAP BH;-,BH,-2-4X16,-,FE	ALL Models
156	BY730204	AC60-00001A	SCREW-MACHINE;-,BH,*,4X12,M4,L12,BLK,SMC	ALL Models
157	70790002	AC60-10063A	SCREW-TAPTITE;BH,+,-,M3,L12,ZPC3,SWRCH18	ALL Models
200	BY634124	AC39-10019A	POWER CORD;KKP-419C,H03VVH2-F,VDE/KEMA-K	"EF/EG/W" Models Only
	BY634126	AC39-12022K	POWER-CORD;Y352160,H03VVH2-F,-,BS6500,1.	"UK" Models Only
CN3A1S	BY634118	3809-001111	CABLE-FLAT;30V,80C,130mm,7P,1.25mm,UL289	ALL Models
CN602A	BY634007	3809-001049	CABLE-FLAT;30V,80C,100MM,5P,1.25MM,UL289	ALL Models
LD601S	BY730082	AC61-21009A	HOLDER-LED;-,POM(M90-44),-,BLK,-,X-9	ALL Models
S601S	BY730080	AC61-21008A	HOLDER-SENSOR;-,POM(M90-44),-,BLK,-,X-9	ALL Models
S602S	BY730080	AC61-21008A	HOLDER-SENSOR;-,POM(M90-44),-,BLK,-,X-9	ALL Models
TM401B	BY730219	AC61-11061A	CONNECTOR BOARD-ASSY;SV-C140F,HIPS94,HB,	"EF" Models Only
	BY730221	AC61-11061C	CONNECTOR BOARD-ASSY;V-629F/TSB,HIPS94,H	"UK" Models Only
	BY730220	AC61-11061B	CONNECTOR BOARD-ASSY;V-629G/TSB,HIPS94,H	"EG/W" Models Only

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
- MECHIANICAL PARTS -				
B238	BY730087	AC61-50660A	SLEEVE-TENSION;-,POM M90-44,-,-,ID3,-,-	
B239	BY730234	AC61-21004A	CAP-#8 GUIDE;-,POM M90-44,-,NTR,-,X-9	
B257	BY730247	AC61-50661A	POST-MAIN PCB;-,POM M90-44,-,-,NTR,-,X-9	
B258	BY730266	AC61-50684A	GUIDE-MAIN PCB;-,POM,OD7,L20,-,BLACK,X-9	
B410	BY730456	AC31-12016D	MOTOR-LOADING ASSY;-,SNHNE,-,-	
B440	BY730072	AC60-10515A	SCREW-MACHINE;-,PH,+,-,M3,L3,ZPC,-,YEL	
B444	BY730104	AC66-20571A	GEAR-WORM;-,POM SW-01,0.5,2,-,4.5,X-9	
B446	BY730079	AC61-21005A	HOLDER-WORM;-,POM M90-44,-,-,-,X-9	
B448	BY730105	AC66-20573A	GEAR-WORM WHEEL;-,POM SW-01,0.6,11,-,6.6	
B452	BY730107	AC66-20575A	GEAR-FL CAM;-,POM SW-01,M0.6,Z88,-,PCD58	
B456	BY730108	AC66-20576A	GEAR-JOINT 1;-,POM SW-01,M1.0,Z22,-,PCD2	
B458	BY730106	AC66-20574A	GEAR-JOINT 2;-,POM SW-01,M1.0,Z14,-,PCD1	
B460	BY730447	AC61-11045A	BRACKET-GEAR;-,SECC20/20,-,T1.2,-,-,X-9	
B462	BY730073	AC60-10517A	SCREW-TAP TITE;-,PH,+,-,M2.6,L5,ZPC,-,YE	
B464	BY730381	AC66-80140A	SLIDER-CAM;-,SECC20/20,T1.2,-,-,X-9	
B468	BY730450	AC66-30541A	LEVER-PINCH DR ASSY;-,-,-,-,-,X-9	
B473	BY730090	AC61-60559A	SPRING-PINCH DRIVE;-,TS,SUS304,PI0.5,OD4	
B474	BY730244	AC61-30180A	PLATE-JOINT;-,SECC20/20,T0.8,-,X-9	
B478	BY730449	AC66-30540A	LEVER-TENS DR ASSY;-,-,-,-,-,X-9	
B484	BY730110	AC66-20580A	GEAR-LOADING DRIVE;-,POM SW-01,M1.0,Z32,	
B488	BY730117	AC66-30543A	LEVER-S LOAD ASSY;-,-,-,-,-,X-9	
B500	BY730116	AC66-30542A	LEVER-T LOAD ASSY;-,-,-,-,-,X-9	
B560	BY730455	AC31-00005A	MOTOR-CAPSTAN;-,F2QSB02,-,-	
B570	BY730071	AC60-10514A	SCREW-CAPSTAN;-,PH,+,M2.6,L6,-	
G001	BY730471	AC97-00566A	ASSY-CYLINDER;CX-9T,SECAM,6HD	"EF" Models
	BY730545	AC97-00551A	ASSY-CYLINDER;CX-9T,PAL,6HD	"UK/EG/W" Models
G420	BY730124	AC66-80142A	SLIDER-SUPPLY ASSY;-,X-9(TS),-,-,-,X-9	
G428	BY730451	AC66-40153A	ROLLER-SUPPLY ASSY;-,VW-32,OD7,-,X-9	
G450	BY730123	AC66-80141A	SLIDER-TAKE UP ASSY;-,X-9(TS),-,-,-,X-9	
G458	BY730452	AC66-40154A	ROLLER-TAKE UP ASSY;-,VW-32,OD7,-,X-9	
G480	BY730052	AC33-00003A	HEAD-ACE-ASSY;SHINHEUNG,-,-,-,-,X-9	
G510	BY730479	6006-001075	SCREW-ASS'Y TAPT;WSP,PH,+,M2.6,L5.0,ZPC(	
G520	BY730115	AC66-30539A	LEVER-#9 GUIDE ASSY;-,X-9(TS),-,-,-,X-9	
G527	BY730088	AC61-60553A	SPRING-#9 GUIDE;-,ES,SUS304-WPB,OD3.1,0.	
G530	BY730053	AC33-00002A	HEAD-FE;-,HVFHP0038A,-,-,-,X-9	
G532	BY730075	AC60-10519A	SCREW-TAP TITE;-,PH,+,-,M2.6,L8,ZPC	
G542	BY730122	AC66-60051A	BELT-PULLEY;-,5CM-70,2 * 2,-,71.3,-,X-9	
G546	BY730113	AC66-30535A	LEVER-FL DOOR;-,POM M90-44,-,-,BLK,X-9	
G555	BY730070	AC59-90403A	UNIT-PINCH ASSY;X-9,-	
G680	BY730372	AC66-30557A	LEVER-H/CLEANER ASSY;-,POM+URETHANE,-,-,	
K110	BY730102	AC66-10267A	REEL-DISK S;-,POM M90-44,-,-,X-9	
K140	BY730103	AC66-10268A	REEL-DISK T;-,POM M90-44,-,-,X-9	
K180	BY730369	AC66-30548A	LEVER-IDLER ASSY;-,POM+NYLON,-,-,-,X-9	
K182	BY730112	AC66-30524A	LEVER-IDLER;-,POM9044,-,-,-,-	
K188	BY730109	AC66-20577A	GEAR-IDLER;-,PEBAX 7033,-,-,-,-,X-9	
K200	BY730084	AC61-21012A	HOLDER-CLUTCH ASSY;-,-,-,-,-,X-9	
K221	BY730111	AC66-20581A	GEAR-CENTER ASSY;-,POM,M=0.5,-,HIGHT T.,	
K222	BY730076	AC60-30306A	WASHER-SLIT;-,-,ID2.1,OD5.0,T0.5,-,POLYS	
K225	BY730119	AC66-30547A	LEVER-UP DOWN ASSY;-,POM+SUS,-,-,-,X-9	
K240	BY730114	AC66-30538A	LEVER-TENSION ASSY;-,X-9(TS),-,-,-,X-9	
K248	BY730089	AC61-60554A	SPRING-TENSION LEVER;-,ES,SUS304-WPB,OD3	
K250	BY730094	AC63-12029A	BAND-BRAKE ASSY;-,X-9(TS),-,-,-,X-9	
K330	BY730121	AC66-30550A	LEVER-S.BRAKE ASSY;-,POM+SUS,-,-,-,X-9	
K340	BY730120	AC66-30549A	LEVER-T.BRAKE ASSY;-,POM+SUS,-,-,-,X-9	
K350	BY730092	AC61-60564A	SPRING-BRAKE;-,TENSION,SWP-A,0.25,3,-,X-	
K470	BY730454	AC66-80139A	SLIDER-FL DRIVE;-,SECC E20/20,T1.2,-,-,X	
K490	BY730083	AC61-21010B	HOLDER-CASS ASSY;-,SECC+POM+SUS,-,-,SEIN	
K502	BY730091	AC61-60561A	SPRING-FL.LEVER-LR;-,ES,SUS304 WPB,PI2.7	
K530	BY730118	AC66-30546A	LEVER-FL.ARM ASS'Y;-,SECC+POM+SUS,-,-,-,	
K546	BY730086	AC61-50658A	GUIDE-CASS. DOOR;-,POM M90-44,-,-,NTR,-,	
- ELECTRICAL PARTS -				
601	BY630098	AC92-00305A	ASSY-PCB-MAIN;V-730EF/TSB,HI-FI	V-730EF
	BY630088	AC92-00306A	ASSY-PCB-MAIN;V-610EF/TSB,HI-FI	V-610EF
	BY630108	AC92-00307A	ASSY-PCB-MAIN;V-510EF/TSB,HI-FI	V-510EF
	BY630109	AC92-00313A	ASSY-PCB-MAIN;V-730UK/TSB,HI-FI	V-730UK
	BY630110	AC92-00314A	ASSY-PCB-MAIN;V-710UK/TSB,HI-FI	V-720UK/710UK
	BY630111	AC92-00321A	ASSY-PCB-MAIN;V-730EG/TSB,HI-FI	V-740EG/730EG
	BY630112	AC92-00310A	ASSY-PCB-MAIN;V-710W/TSB,HI-FI	V-720W/710W
602	BY630092	AC92-00504A	ASSY-PCB-SUB;SV-633F,V-730EF,A2/NICAM	
701	BY630099	AC92-00325A	ASSY-PCB-VFD-AVLINK;V-730EF/TSB,VFD-AVLI	V-730EF/730UK/740EG/730EG
	BY630090	AC92-00324A	ASSY-PCB-VFD-Only;V-610EF/TSB,VFD-Only	V-610EF
	BY630113	AC92-00509A	ASSY-PCB-VFD;V-510EF,V-720UK,VFD-Only,TS	V-510EF/720UK/710UK/720W/710W
702	BY630100	AC92-00326A	ASSY-PCB-F/AV-SRC;V-730EF/TSB,F/AV-SRC	V-730EF/740EG/730EG
	BY630114	AC92-00428A	ASSY-PCB-SRC;V-610EF/TSB,SRC Only	V-610EF
	BY630078	AC92-00091A	ASSY-PCB-SUB;V-729EG/TSB,CBC2	V-730UK
	BY630115	AC92-00454A	ASSY-PCB-F/AV;V-W57H/TSB,F/AV-HIFI	V-720W/710W

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
<INTERGRATED CIRCUITS>				
IC1SF1	BY631087	1203-001802	IC-PWM CONTROLLER;STR-G6551,TO-220F,5P,-	
IC1SS1	BY530004	0604-001028	PHOTO-COUPLER;TR,50-600%,250mW,DIP-4,ST	⚠
IC1SS2	BY631008	AC14-12006D	IC;KA431Z,TO-92,TAPING	
IC301	BY631049	1204-001649	IC-VIDEO PROCESS;LA71598M,QFP,100P,-,PLA	
IC3S01	BY631062	1204-001437	IC-CHROMA;LA7359,DIP,28P,400MIL,PLASTIC,	"EF" Models Only
IC4N01	BY631063	1204-001516	IC-AUDIO PROCESSOR;MSP3417D,DIP,52P,551M	
IC501	BY631023	1204-001479	IC-AUDIO PROCESSOR;LA72634AM,QFP,64P,400	
IC601	BY631092	AC09-00109A	IC-MICOM;uPD784927GF-155-3BA,784927GF-1	"EF/EG" Models Only
IC601	BY631098	AC09-00105A	IC-MICOM;uPD784927GF-156-3BA,784927GF-1	"UK" Models Only
IC601	BY631099	AC09-00107A	IC-MICOM;uPD784927GF-158-3BA,784927GF-1	"W" Models Only
IC602	BY631022	1003-001162	IC-MOTOR DRIVER;KA3082,SIP,10PIN,25MIL,D	
IC604	70795269	AC14-12006C	IC;KA7533,DIP,-	
IC605	BY631082	1103-001150	IC-EEPROM;24C081,8KBIT,DIP,8P,300MIL,10M	
IC608	BY631059	1203-000515	IC-VOL. DETECTOR;7042,TO-92,3P,177MIL,PL	
IC6P01	BY631068	AC09-12014Z	IC-MCU;LC74776M,30P,MFP,OSD/VPS/PDC I	
IC6P01	BY631066	AC09-10459G	IC-MCU;LC74789YJM-9771,24P,MFP,OSD IC	V-510EF Only
IC6P01	BY631100	AC09-00115A	IC-OSD;LC74759JM-9792,LC74759JM-9792,	"W" Models Only
IC701	BY631094	AC09-00092A	IC MCU;uPD780232GC-014-8BT,uPD780232G	
IC801	BY631064	1205-001484	IC-SWITCH;LA7147M,SOP,36PIN,375MIL,PLAST	
<TRANSISTORS>				
Q1P101	70693265	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
Q1P102	70693265	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
Q1P103	70693265	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
Q1P104	70693410	0501-000610	TR-SMALL SIGNAL;KSA928A-Y,PNP,1W,TO-92L,	
Q1P105	70795137	0504-000116	TR-DIGITAL;KSR1001,NPN,300MW,4.7K/4.7K,T	
Q1P106	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q1P107	70795818	0501-000290	TR-SMALL SIGNAL;KSA643-Y,PNP,500mW,TO-92	
Q1P110	70795137	0504-000116	TR-DIGITAL;KSR1001,NPN,300MW,4.7K/4.7K,T	
Q1P111	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
Q1P112	70795818	0501-000290	TR-SMALL SIGNAL;KSA643-Y,PNP,500mW,TO-92	
Q1P114	70693265	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
Q1P115	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
Q1P116	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q1P117	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q302	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q303	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q304	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q308	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q309	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q3A01	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q3A03	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3A04	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3A05	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3A06	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q3D01	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3D02	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
Q3D03	BY530014	0504-000119	TR-DIGITAL;KSR1004,NPN,300MW,47K/47K,TO-	
Q3S01	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	"EF" Models Only
Q3S02	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	"EF" Models Only
Q3S03	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	"EF" Models Only
Q3S04	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	"EF" Models Only
Q3S05	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	"EF" Models Only
Q602	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q6B01	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	V-730EF/610EF/730UK/740EG/730EG Only
Q6B03	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	V-730EF/610EF/730UK/740EG/730EG Only
Q6B04	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	V-730EF/610EF/730UK/740EG/730EG Only
Q6P01	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q6P02	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q6P03	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q701	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
<DIODES>				
D1P101	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P103	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P105	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P108	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P109	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P110	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P111	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P113	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P114	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P115	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P117	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P119	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P120	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P125	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1SD11	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
D1SD31	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D1SD32	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D1SF05	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SF12	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D1SS01	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SS02	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SS03	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SS04	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SS11	BY430008	0402-000276	DIODE-RECTIFIER;UF4007,1KV,1A,DO-41,TP	
D1SS31	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D1SS32	BY430010	0402-001194	DIODE-RECTIFIER;UG2D,200V,2A,DO-204AC,TP	
D1SS33	BY430065	0404-001069	DIODE-SCHOTTKY;B10A45VI,45V,10A,TO-220IS	
D1SS44	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D302	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D3S02	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	"EF" Models Only
D401	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D4N01	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D4N02	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D603	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D604	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D605	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D611	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D620	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D701	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D702	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D702	BY430014	0403-001141	DIODE-ZENER;MTZJ24D,24V,23.63-24.85V,500	
D703	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D704	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D705	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D706	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D706	BY430004	0403-000509	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
D707	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D708	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D709	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D805	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
LD601	BY430016	0601-000517	LED-IR;RECTANGULA,4x6.0mm,75mW,6V,950	
LD6B01	70796042	0601-000494	LED-IR;ROUND,5mm,140mW,5V,940nm,-	
LD701	70796042	0601-000494	LED-IR;ROUND,5mm,140mW,5V,940nm,-	
LD702	70796042	0601-000494	LED-IR;ROUND,5mm,140mW,5V,940nm,-	
LD703	BY430066	0601-001201	LED;ROUND,RED,3mm,635nm	
W167	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
W532	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
ZD1P01	BY430015	0403-001211	DIODE-ZENER;MTZJ12B,11.44-12.03V,500MW,D	
ZD1P02	BY430005	0403-000717	DIODE-ZENER;MTZJ5.1B,5.1V,4.94-5.2V,500m	
ZD1P03	BY430013	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
ZD1P06	BY430015	0403-001211	DIODE-ZENER;MTZJ12B,11.44-12.03V,500MW,D	
ZD401	70795272	0403-000390	DIODE-ZENER;UZP33B,33V,31.4-34.6V,1W,DO-	
<INDUCTORS>				
BD1SD1	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
BD1SF1	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
BD1SF3	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
BD1SR1	BY330003	3301-000297	CORE-FERRITE BEAD;AA,3.6x1.2x5.7mm,1400,	
BD1SS2	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
BD1SS3	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
FL3A01	BY330004	AC27-80100A	COIL-OSC;126QN-K5272YHC=K,-,AM	
FL3D01	BY330055	AC27-82001C	COIL-BIAS OSC;B02,W(TOKO)VX1850,-	
L1SS02	BY634272	AC29-00002A	FILTER LINE NOISE;-,30mH,-,-,BLF-2116	⚠
L1SS31	70796213	AC27-12001N	COIL-CHOKE;10UH-15%,RA,K-30,Q80,150KHZ,-	
L1SS32	70796213	AC27-12001N	COIL-CHOKE;10UH-15%,RA,K-30,Q80,150KHZ,-	
L301	70795841	2701-000206	INDUCTOR-AXIAL;56uH,5%,2.4x3.4mm	
L302	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L304	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L305	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L306	70796361	2701-000119	INDUCTOR-AXIAL;120uH,5%,2.4x3.4mm	
L310	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L3A01	70795171	2702-000120	INDUCTOR-RADIAL;15mH,5%,6.2x7.4mm	
L3A02	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L3A03	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L3D01	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L3S01	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	"EF" Models Only
L3S02	70795863	2702-000179	INDUCTOR-RADIAL;6.8uH,5%,6x6.4mm	"EF" Models Only
L3S03	BY330052	2701-000165	INDUCTOR-AXIAL;27uH,5%,2.4x3.4mm	"EF" Models Only
L3S04	70795843	2701-000195	INDUCTOR-AXIAL;47uH,5%,2.4x3.4mm	"EF" Models Only
L3S05	70795162	2701-000160	INDUCTOR-AXIAL;22uH,5%,2.4x3.4mm	"EF" Models Only
L401	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L402	BY330003	3301-000297	CORE-FERRITE BEAD;AA,3.6x1.2x5.7mm,1400,	
L4N01	70796075	2701-000188	INDUCTOR-AXIAL;4.7uH,5%,2.4x3.4mm	
L4N02	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
L4N03	70796075	2701-000188	INDUCTOR-AXIAL;4.7uH,5%,2.4x3.4mm	
L4N04	BY330003	3301-000297	CORE-FERRITE BEAD;AA,3.6x1.2x5.7mm,1400,	
L502	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L503	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L601	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L603	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L604	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L605	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L6B01	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	V-730EF/610EF/730UK/740EG/730EG Only
L6B02	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L6P03	70795162	2701-000160	INDUCTOR-AXIAL;22uH,5%,2.4x3.4mm	
L6P04	BY330054	2701-000201	INDUCTOR-AXIAL;5.6uH,5%,2.4x3.4mm	
L6P05	BY330052	2701-000165	INDUCTOR-AXIAL;27uH,5%,2.4x3.4mm	
L701	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	V-730EF/730UK/740EG/730EG/720W/710W Only
L702	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	V-730EF/730UK/740EG/730EG/720W/710W Only
L702	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L801	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L802	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L803	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L804	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L805	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	"UK" Models Not used
L806	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	"UK" Models Not used
L807	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L808	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L809	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L810	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L811	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L812	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L813	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
L814	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
<CAPACITORS>				
C1P101	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C1P102	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C1P103	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1P104	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C1P105	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C1P106	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C1P107	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C1P108	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C1P110	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1P114	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1P115	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1P116	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1SD03	BY130219	2201-000812	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,BK,12.	
C1SD04	BY130219	2201-000812	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,BK,12.	
C1SD11	BY130283	2401-003302	C-AL;47uF,20%,400V,GP,TP,18X31.5,7.	
C1SD12	BY130226	2305-001029	C-FILM,MPEF;10nF,10%,630V,TP,12x9x12.5,5	
C1SD13	70795070	2201-000376	C-CERAMIC,DISC;0.22nF,5%,50V,SL,TP,6.3x3	
C1SF12	BY130296	2401-001200	C-AL;33uF,20%,50V,WT,TP,6.3x11,5	
C1SS01	BY130272	2305-001021	C-FILM,MPEF;100nF,20%,275V,TP,17.5x7x13.	⚠
C1SS02	BY130272	2305-001021	C-FILM,MPEF;100nF,20%,275V,TP,17.5x7x13.	⚠
C1SS12	BY130258	2201-000129	C-CERAMIC,DISC;0.1nF,10%,1kV,Y5P,TP,7x4,	
C1SS31	70795431	2401-000385	C-AL;10uF,20%,100V,GP,TP,6.3x11,5	
C1SS32	BY130281	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
C1SS33	BY130251	2401-003477	C-AL;330UF,20%,25V,LZ,TP,10X12.5MM,	
C1SS34	BY130338	2401-003478	C-AL;100UF,20%,25V,LZ,TP,8X11.5MM,5	
C1SS35	BY130339	2401-003480	C-AL;1000UF,20%,10V,LZ,TP,10X16MM,5	
C1SS36	BY130015	2401-001479	C-AL;470uF,20%,10V,GP,-,-,TP	
C1SS37	BY130281	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
C1SS38	BY130015	2401-001479	C-AL;470uF,20%,10V,GP,-,-,TP	
C1SS39	70796098	2301-000129	C-FILM,PEF;100nF,5%,50V,TP,10X9X4.3X5,5m	
C1SS40	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	
C301	70795769	2401-001919	C-AL;2.2UF,20%,50V,-,TP,4X7MM,5	
C302	BY130024	2301-000283	C-FILM,PEF;47nF,5%,100V,TP,7.3X7X3.2X5,5	
C303	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C304	70795080	2202-000216	C-CERAMIC,MLC-AXIAL;.027NF,5%,50V,SL,TP,	
C305	70697011	2202-000164	C-CERAMIC,MLC-AXIAL;.18NF,10%,50V,Y5P,TP	
C306	BY130263	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C307	70795076	2202-000162	C-CERAMIC,MLC-AXIAL;.015NF,5%,50V,SL,TP,	
C308	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C309	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C310	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C311	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C312	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	V-730EF/730UK/740EG/730EG/720W/710W Only
C313	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C314	BY130278	2401-001775	C-AL;470nF,20%,50V,GP,TP,4x7,5	
C315	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C316	BY130167	2202-002055	C-CERAMIC,MLC-AXIAL;47nF,+80-20%,50V,Y5V	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
C318	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C320	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C321	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C322	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C323	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C324	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C325	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C326	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C327	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C328	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C329	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C330	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C331	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C332	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C333	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C334	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C335	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C336	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C337	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C338	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C339	BY130167	2202-002055	C-CERAMIC,MLC-AXIAL;47nF,+80-20%,50V,Y5V	
C340	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C341	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C342	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C343	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C345	BY130260	2201-002031	C-CERAMIC,DISC;0.005nF,0.5pF,50V,NP0,TP,	
C346	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C347	BY130173	2202-000286	C-CERAMIC,MLC-AXIAL;56pF,5%,50V,SL,TP,1.	
C348	BY130173	2202-000286	C-CERAMIC,MLC-AXIAL;56pF,5%,50V,SL,TP,1.	
C349	BY130265	2202-000849	C-CERAMIC,MLC-AXIAL;18pF,5%,50V,CH,TP,3.	
C350	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C360	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	V-730EF/730UK/740EG/730EG/720W/710W Only
C380	70795616	2202-000243	C-CERAMIC,MLC-AXIAL;33pF,5%,50V,SL,TP,3.	
C381	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C390	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C399	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A01	70795626	2401-003122	C-AL;4.7uF,20%,50V,LL,TP,4X7,1.5	
C3A02	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A04	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A07	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	
C3A08	BY130041	2301-001014	C-FILM,PEF;6.8nF,5%,50V,TP,7x3x6,5mm	
C3A09	BY130041	2301-001014	C-FILM,PEF;6.8nF,5%,50V,TP,7x3x6,5mm	
C3A10	BY130085	2301-000314	C-FILM,PEF;8.2nF,5%,50V,TP,6.5x3.0x5.5mm	
C3A11	70693281	2301-000392	C-FILM,PEF;15nF,5%,50V,TP,6.5x8.5x3.2mm,	
C3A12	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C3A13	BY130269	2301-000161	C-FILM,PEF;12nF,5%,50V,TP,6.5X5.5X3.0X5,	
C3A14	BY130041	2301-001014	C-FILM,PEF;6.8nF,5%,50V,TP,7x3x6,5mm	
C3A15	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	
C3A16	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C3A17	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C3A18	70795094	2301-000402	C-FILM,PEF;1nF,5%,50V,TP,5x7x2.8mm,5mm	
C3A21	BY130267	2301-000008	C-FILM,PEF;2.2nF,5%,50V,TP,5.5X7X3,5mm	
C3A23	BY130250	2401-002068	C-AL;33uF,20%,16V,GP,TP,5x11,5	
C3A24	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A25	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C3A29	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A30	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C3D01	BY130024	2301-000283	C-FILM,PEF;47nF,5%,100V,TP,7.3X7X3.2X5,5	
C3D02	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C3D03	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C3D04	70699067	2301-000445	C-FILM,PEF;4.7nF,5%,50V,TP,5.5x7x3mm,5mm	
C3D05	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	
C3S01	70697011	2202-000164	C-CERAMIC,MLC-AXIAL;.18NF,10%,50V,Y5P,TP	"EF" Models Only
C3S02	70795769	2401-001919	C-AL;2.2UF,20%,50V,-,TP,4X7MM,5	"EF" Models Only
C3S03	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	"EF" Models Only
C3S04	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	"EF" Models Only
C3S05	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	"EF" Models Only
C3S06	70795363	2202-000791	C-CERAMIC,MLC-AXIAL;150pF,10%,50V,Y5P,TP	"EF" Models Only
C3S07	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	"EF" Models Only
C3S08	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	"EF" Models Only
C3S09	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	"EF" Models Only
C3S11	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	"EF" Models Only
C3S13	BY130278	2401-001775	C-AL;470nF,20%,50V,GP,TP,4x7,5	"EF" Models Only
C3S14	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	"EF" Models Only
C3S15	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	"EF" Models Only
C3S17	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	"EF" Models Only
C3S19	70795070	2201-000376	C-CERAMIC,DISC;0.22nF,5%,50V,SL,TP,6.3x3	"EF" Models Only
C3S20	BY130082	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5	"EF" Models Only
C3S21	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	"EF" Models Only

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
C3S22	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	"EF" Models Only
C3S23	70693492	2201-000941	C-CERAMIC,DISC;51pF,5%,50V,SL,TP,5x3,5	"EF" Models Only
C3S25	70693215	2202-000787	C-CERAMIC,MLC-AXIAL;10PF,5%,50V,Y5P,TP,3	"EF" Models Only
C3S26	70795729	2201-000681	C-CERAMIC,DISC;0.082nF,5%,50V,SL,TP,5x3,	"EF" Models Only
C3S27	70693237	2202-000825	C-CERAMIC,MLC-AXIAL;680pF,10%,50V,Y5P,TP	"EF" Models Only
C402	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C403	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C404	70795123	2401-001085	C-AL;330NF,20%,50V,GP,-,5X9,2MM	
C405	BY130281	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
C407	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C410	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C4N01	70795338	2202-000848	C-CERAMIC,MLC-AXIAL;1.5NF,30%,50V,Y5S,TP	
C4N02	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C4N03	70693317	2202-000806	C-CERAMIC,MLC-AXIAL;220pF,10%,50V,Y5P,TP	
C4N04	BY130274	2401-000661	C-AL;2.2uF,20%,50V,GP,TP,5x11,5	
C4N05	70795585	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
C4N06	70795585	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
C4N07	BY130172	2202-000263	C-CERAMIC,MLC-AXIAL;470pF,10%,50V,Y5P,TP	
C4N08	70795338	2202-000848	C-CERAMIC,MLC-AXIAL;1.5NF,30%,50V,Y5S,TP	
C4N09	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C4N10	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C4N11	BY130279	2401-002062	C-AL;3.3UF,20%,50V,GP,TP,5X11,2.5	
C4N12	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C4N13	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C4N14	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C4N15	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C4N16	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C4N17	BY130172	2202-000263	C-CERAMIC,MLC-AXIAL;470pF,10%,50V,Y5P,TP	
C4N18	BY130172	2202-000263	C-CERAMIC,MLC-AXIAL;470pF,10%,50V,Y5P,TP	
C4N19	70693047	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
C4N21	BY130261	2201-002069	C-CERAMIC,DISC;1.5pF,0.25pF,50V,NPO,TP,4	
C4N22	BY130261	2201-002069	C-CERAMIC,DISC;1.5pF,0.25pF,50V,NPO,TP,4	
C4N23	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C4N24	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C4N25	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C501	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C502	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C503	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C504	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C505	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	
C506	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C507	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C508	70699067	2301-000445	C-FILM,PEF;4.7nF,5%,50V,TP,5.5x7x3mm,5mm	
C509	BY130270	2301-000423	C-FILM,PEF;3.3NF,5%,100V,TP,7X10X4.5MM,5	
C510	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C511	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C512	BY130266	2202-000863	C-CERAMIC,MLC-AXIAL;560pF,10%,50V,Y5P,TP	
C513	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C514	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C515	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C516	BY130270	2301-000423	C-FILM,PEF;3.3NF,5%,100V,TP,7X10X4.5MM,5	
C517	70699067	2301-000445	C-FILM,PEF;4.7nF,5%,50V,TP,5.5x7x3mm,5mm	
C518	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C519	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	
C520	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C521	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C522	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C523	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C524	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C525	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C526	BY130280	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C527	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C529	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C530	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C531	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C532	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C601	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C602	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C603	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C604	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C605	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C607	BY130278	2401-001775	C-AL;470nF,20%,50V,GP,TP,4x7,5	
C608	BY130131	2401-002259	C-AL;0.1F,+80-20%,5.5V,-,TP,12.5x11	"EF" Models Only
C608	70796210	2401-000118	C-AL;1000uF,20%,10V,GP,TP,10x12.5,5	
C610	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C611	70693281	2301-000392	C-FILM,PEF;15nF,5%,50V,TP,6.5x8.5x3.2mm,	
C612	70796210	2401-000118	C-AL;1000uF,20%,10V,GP,TP,10x12.5,5	
C614	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C618	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
C619	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C620	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C621	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C622	70693497	2301-000471	C-FILM,PEF;68nF,5%,50V,TP,9x12x4.5mm,5mm	
C623	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C624	70795614	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
C625	70795614	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
C626	70795614	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
C627	70795614	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
C628	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C633	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C634	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C635	BY130072	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP	
C636	BY130072	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP	
C637	BY130172	2202-000263	C-CERAMIC,MLC-AXIAL;470pF,10%,50V,Y5P,TP	
C638	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C639	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
C640	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C641	BY130280	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C642	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C643	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C645	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C646	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C691	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C692	70693497	2301-000471	C-FILM,PEF;68nF,5%,50V,TP,9x12x4.5mm,5mm	
C6B02	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	V-730EF/610EF/730UK/740EG/730EG Only
C6B03	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	V-730EF/610EF/730UK/740EG/730EG Only
C6B04	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	V-730EF/610EF/730UK/740EG/730EG Only
C6B05	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C6B07	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C6B08	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C6B09	BY130280	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C6P01	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C6P02	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C6P03	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C6P04	70795080	2202-000216	C-CERAMIC,MLC-AXIAL;.027NF,5%,50V,SL,TP,	
C6P05	70795080	2202-000216	C-CERAMIC,MLC-AXIAL;.027NF,5%,50V,SL,TP,	
C6P06	BY130271	2301-000458	C-FILM,PEF;56nF,5%,50V,TP,8x12x4.5mm,5mm	"EF/UK/EG" Models Only
C6P07	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	"EF/UK/EG" Models Only
C6P08	BY130173	2202-000286	C-CERAMIC,MLC-AXIAL;56pF,5%,50V,SL,TP,1.	
C6P09	BY130170	2202-000145	C-CERAMIC,MLC-AXIAL;.12NF,10%,50V,Y5P,TP	V-510EF/720W/710W Only
C6P10	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C6P11	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C6P12	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C6P13	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C6P14	70693047	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
C6P20	70693047	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
C6P20	70795082	2202-000295	C-CERAMIC,MLC-AXIAL;68pF,5%,50V,SL,TP,3.	V-510EF/720W/710W Only
C701	BY130280	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C702	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C703	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C706	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C707	70795626	2401-003122	C-AL;4.7uF,20%,50V,LL,TP,4X7,1.5	
C708	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C711	70795362	2202-000789	C-CERAMIC,MLC-AXIAL;12PF,5%,50V,SL,TP,3.	
C712	70795362	2202-000789	C-CERAMIC,MLC-AXIAL;12PF,5%,50V,SL,TP,3.	
C801	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C802	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C803	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C804	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C805	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C806	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C807	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C808	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C809	70795769	2401-001919	C-AL;2.2UF,20%,50V,-,TP,4X7MM,5	
C810	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	"UK" Models Not used
C811	BY130263	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	"UK" Models Not used
C812	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	"UK" Models Not used
C813	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C814	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C815	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C816	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	"EF" Models Only
C816	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C817	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C818	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C819	BY130280	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C820	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C821	BY130015	2401-001479	C-AL;470uF,20%,10V,GP,-,-,TP	
C822	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
C823	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
C826	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	"UK" Models Not used
C827	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
C828	70693047	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
C829	70693047	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
C830	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C831	BY130263	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C832	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C833	BY130263	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C834	BY130263	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	"UK" Models Not used
C837	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C838	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C840	BY130015	2401-001479	C-AL;470uF,20%,10V,GP,-,-,TP	"UK" Models Not used
<RESISTORS>				
R1P103	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P105	70795007	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P106	70795036	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P107	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P108	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P109	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P110	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P111	70795003	2001-000302	R-CARBON;10OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P112	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P115	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P116	70795029	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P117	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P119	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P121	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P122	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P123	70795007	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P125	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P127	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P128	70795013	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P129	BY230106	2001-000938	R-CARBON;68OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P130	BY230019	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SD12	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SD13	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SD14	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SD15	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SD16	70796274	2003-000273	R-METAL OXIDE;33Kohm,5%,2W,AA,TP,6x16mm	
R1SD31	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SD32	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SF11	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SF15	70795031	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SF19	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SF20	BY230147	2003-000105	R-METAL OXIDE;0.33ohm,5%,2W,AD,TP,6x16mm	
R1SF21	BY230036	2001-000096	R-CARBON(S);1MOHM,5%,1/2W,AA,TP,2.4X6.4M	
R1SS10	BY230170	2006-000262	R-CEMENT;2.7ohm,10%,2W,CB,TP,7.5x11x20.	
R1SS11	70796274	2003-000273	R-METAL OXIDE;33Kohm,5%,2W,AA,TP,6x16mm	
R1SS13	BY230003	2003-000148	R-METAL OXIDE;100OHM,5%,2W,AE,TP,6X16MM	
R1SS31	70795009	2001-000440	R-CARBON;1OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SS32	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SS33	70795640	2004-000869	R-METAL;3Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
R1SS34	70795638	2004-000459	R-METAL;2.2Kohm,1%,1/8W,AA,TP,1.8x3.2m	
R301	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R302	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R303	70795357	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R304	70795058	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R305	70795357	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R306	70795012	2001-000232	R-CARBON;1.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R308	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R309	BY230037	2001-000723	R-CARBON;4.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R311	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R312	70795013	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R313	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R314	70795050	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R315	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R316	BY230019	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R317	70795030	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R318	70795030	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R320	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R321	BY230096	2001-000009	R-CARBON;20KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R322	70795319	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R325	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R326	70795043	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R327	70795043	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R328	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R329	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
R330	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R331	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R332	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R333	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R334	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R335	70795044	2001-000800	R-CARBON;5.1KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R336	70795014	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R341	70795059	2001-001000	R-CARBON;82KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R342	70795046	2001-000802	R-CARBON;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R344	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-730EF/730UK/740EG/730EG/720W/710W Only
R347	70795049	2001-000904	R-CARBON;620OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R348	70795609	2001-000605	R-CARBON;3.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A01	70795011	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A04	70795012	2001-000232	R-CARBON;1.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A05	70795032	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A06	70795607	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A07	70795033	2001-000645	R-CARBON;330KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A08	70795011	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A09	70795046	2001-000802	R-CARBON;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R3A10	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A11	70795357	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A12	70796025	2001-000458	R-CARBON;2.2OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A13	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A14	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A16	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A17	70795036	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A18	70795036	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A19	70795607	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A21	70795049	2001-000904	R-CARBON;620OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A22	BY230037	2001-000723	R-CARBON;4.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A23	70795058	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A24	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A25	BY230019	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A26	70795011	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A28	70795013	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A30	70795354	2001-000773	R-CARBON;470KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A37	70795055	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3D01	70796129	2001-000793	R-CARBON;47OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3D02	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3D03	70795042	2001-000745	R-CARBON;4.7OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3S01	70795319	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S02	70795058	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S03	70795663	2001-001015	R-CARBON;9.1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S04	70795319	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S05	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S11	70795045	2001-000837	R-CARBON;51KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S12	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S13	70795029	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S14	70795051	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S15	70795055	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S16	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S17	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S20	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S21	70795034	2001-000674	R-CARBON;360OHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S22	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S23	70795319	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S24	70795015	2001-000356	R-CARBON;150KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S25	70795357	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S27	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R401	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R402	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R403	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R404	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R406	70795026	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R407	70795058	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R408	BY230019	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R4N01	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R4N02	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R4N03	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R4N04	70795026	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R4N05	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R4N06	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R501	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R502	70795663	2001-001015	R-CARBON;9.1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R503	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R504	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R505	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R506	70795663	2001-001015	R-CARBON;9.1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R507	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,	V-730EF/730UK/740EG/730EG/720W/710W Only

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
R508	70795447	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,	V-730EF/730UK/740EG/730EG/720W/710W Only
R509	70795447	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R510	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R511	70795011	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R512	70795032	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R514	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R516	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R517	70795447	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R518	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R519	70795447	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,	V-730EF/730UK/740EG/730EG/720W/710W Only
R520	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,	V-730EF/730UK/740EG/730EG/720W/710W Only
R521	70795447	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R522	70795447	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R523	70795022	2001-000508	R-CARBON;220KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R524	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R525	70795506	2001-000577	R-CARBON;2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R533	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R540	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R570	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R571	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R602	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R603	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R603	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"UK/EG/W" Models Only
R604	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R605	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R608	70795047	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R609	70795047	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R613	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R641	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R642	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R644	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R650	70796369	2003-000259	R-METAL OXIDE;3.9OHM,5%,2W,AE,TP,6X16MM	
R651	70795052	2001-000010	R-CARBON;68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R652	70795024	2001-000568	R-CARBON;27OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R654	70795046	2001-000802	R-CARBON;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R655	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R656	70795013	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R657	70795052	2001-000010	R-CARBON;68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R660	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R661	70795032	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R666	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R667	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R668	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R669	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R670	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R671	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R672	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R673	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R674	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R675	70795607	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R676	70795029	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R677	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R678	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R679	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R682	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R685	70795032	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R687	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R690	70795047	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R691	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R692	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R693	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R694	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6B01	70796024	2001-000384	R-CARBON;160OHM,5%,1/8W,AA,TP,	V-730EF/610EF/730UK/740EG/730EG Only
R6B02	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,	V-730EF/610EF/730UK/740EG/730EG Only
R6B03	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,	V-730EF/610EF/730UK/740EG/730EG Only
R6B10	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6B11	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6P01	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-510EF/720W/710W Not used
R6P02	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-510EF/720W/710W Not used
R6P03	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	V-510EF/720W/710W Not used
R6P04	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	V-510EF/720W/710W Not used
R6P05	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6P06	70795046	2001-000802	R-CARBON;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	V-510EF/720W/710W Not used
R6P07	70796356	2001-000490	R-CARBON;200OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6P08	70795028	2001-000007	R-CARBON;3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6P09	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	V-510EF/720W/710W Only
R6P10	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6P11	BY230090	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R706	70795029	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
R707	70795013	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R708	70795026	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R709	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R710	70795008	2001-000435	R-CARBON;1MOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R727	70795014	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R728	70795014	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R731	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R732	BY230100	2001-000666	R-CARBON;33OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R801	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R802	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R803	70795057	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R805	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R806	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R807	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R808	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R809	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	"UK" Models Not used
R810	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R811	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R812	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R813	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R814	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R815	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R816	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R819	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	"UK" Models Not used
R820	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	"UK" Models Not used
R821	70795032	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R822	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R823	70795026	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R824	70795026	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
S601	BY530003	0603-001011	PHOTO-TR;NPN,35V,6V,50mA,75mW,BK	
S602	BY530003	0603-001011	PHOTO-TR;NPN,35V,6V,50mA,75mW,BK	
W229	70795609	2001-000605	R-CARBON;3.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
W421	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,	V-730EF/730UK/740EG/730EG/720W/710W Only
<MISCELLANEOUS>				
CN1SS1	70796223	3711-000178	CONNECTOR-HEADER;1WALL,2P,1R,3.96mm,STRA	
CN301	70796387	3708-000391	CONNECTOR-FPC/FC/PIC;10P,1.25MM,STRAIGHT	
CN3A01	BY634038	3708-001302	CONNECTOR-FPC/FC/PIC;7P,1.25mm,STRAIGHT,	
CN3A02	70796246	3711-002445	CONNECTOR-HEADER;BOX,2P,2R,1.5MM,STRAIGH	
CN4N01	BY634116	3711-003176	CONNECTOR-HEADER;NOWALL,10P,1R,2.5mm,ANG	
CN601	BY634047	AC39-20817S	LEAD CONNECTOR-ASSY;DP,SMH200-02,YBH200-	
CN602	BY634003	3708-001163	CONNECTOR-FPC/FC/PIC;5P,1.25mm,STRAIGHT,	
CN604	BY634026	3711-003749	CONNECTOR-HEADER;BOX,8P,2R,2mm,STRAIGHT,	
CN701	70795274	3711-001198	CONNECTOR-HEADER;NOWALL,10P,1R,2mm,ANGLE	
CN702	70795274	3711-001198	CONNECTOR-HEADER;NOWALL,10P,1R,2mm,ANGLE	
CN704	BY634040	3711-004013	CONNECTOR-HEADER;3WALL,10P,1R,2mm	V-730EF/730UK/740EG/730EG/720W/710W Only
CN705	BY634039	3710-001385	CONNECTOR-SOCKET;10P,1R,2mm,ANGLE,SN	
DT701	BY634119	AC07-20051C	VF-DISPLAY;SVV-07SS27,15SEG,20.5X75.0,SV	
F1SS01	BY634268	3601-001208	FUSE-CARTRIDGE;250V,1.6A,TIME-LAG,GLASS	⚠
JC801	BY634117	3722-001093	JACK-RCA;42P,3.81MM,SN,BLU/BLK,#20-28	
JC802	BY634121	AC37-22002E	JACK-PIN;3.5MM,DPAE9634,2P,TR,-	
JK701	BY634045	AC37-22002H	JACK-PIN;3.2mm,DPSE-9826,3P,10mm,ARREY	
PT1SS1	BY634271	AC26-00001L	TRANS-SWITCHING;-,-,-,230V,DEMCO,EE2821,	⚠
PT601	BY530005	0604-001122	PHOTO-INTERRUPTER;TR,0.065%,150mW,DIP-4,	
PT602	BY530005	0604-001122	PHOTO-INTERRUPTER;TR,0.065%,150mW,DIP-4,	
RM701	BY634036	AC59-60060A	MODULE-REMOCON;GP1U281R,SHARP,38KHZ,-,-,	
SW601	BY632004	AC34-20100A	SWITCH-MODE;-,-,X-9,-	
SW602	BY632005	AC34-20100B	SWITCH-REC;-,-,X-9,-	
SW701	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW703	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW708	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW709	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW712	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW714	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW715	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW716	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW719	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW720	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW721	70795181	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm	
SW801	BY632010	3404-000135	SWITCH-TACT;12V,50mA,160+-50gf,7.4x7.1mm	
TM401	BY630052	AC40-30072F	TM-BLOCK;TCMM0601PD08A,SECAM-L/G/I/K,181	"EF" Models Only
TM401	BY630053	AC40-30072H	TM-BLOCK;TCMK0601PD08A,PAL-BG/I/DK,HI-F	"UK/EG/W" Models Only
VA1SS1	BY634022	1405-001026	VARISTOR;470V,600A,9x7mm,TP	⚠
XT301	BY633009	2801-001397	CRYSTAL-UNIT;4.433619MHZ,HC-49/U-S 15PPM	
XT4N01	BY633011	2801-003171	CRYSTAL-UNIT;18.432MHz,20PPM,28-AAM,4PF,	
XT601	BY633003	2801-003318	CRYSTAL-UNIT;32.768KHz,20ppm,28-AAP,12.5	
XT602	BY633010	2801-003139	CRYSTAL-UNIT;8MHz,50ppm,28-AAA,22pF,80oh	
XT701	BY633014	2801-003868	CRYSTAL-UNIT;5MHz,30ppm,28-AAA,12pF,100o	

7-2 MONO Models (V-430EF/230EF/220EF/430YK/230UK/220UK/210UK/430EG/230EG/210EG/420W/410W/220W/210W)

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
- PACKING PARTS -				
A701	BY730586	AC69-00067D	PACKING-CASE;V-430EF,-,-,-,-,SW2+YEL,-,-	V-430EF
	BY730587	AC69-00067E	PACKING-CASE;V-230EF,-,-,-,-,SW2+YEL,-,-	V-230EF
	BY730467	AC69-00067F	PACKING-CASE;V-220EF,-,-,-,-,SW2+YEL,-,-	V-220EF
	BY730575	AC69-00042B	PACKING CASE;V-430UK,-,-,428,150,YEL,-,-	V-430UK
	BY730576	AC69-00042C	PACKING CASE;V-230UK,-,-,428,150,YEL,-,-	V-230UK
	BY730577	AC69-00042D	PACKING CASE;V-220UK,-,-,428,150,YEL,-,-	V-220UK
	BY730578	AC69-00042E	PACKING CASE;V-210UK,-,-,428,150,YEL,-,-	V-210UK
	BY730579	AC69-00042F	PACKING CASE;V-430EG,-,-,428,150,YEL,-,-	V-430EG
	BY730580	AC69-00042G	PACKING CASE;V-230EG,-,-,428,150,YEL,-,-	V-230EG
	BY730581	AC69-00042H	PACKING CASE;V-210EG,-,-,428,150,YEL,-,-	V-210EG
	BY730584	AC69-00042L	PACKING CASE;V-420W,-,-,428,150,YEL,-,-,	V-420W
	BY730582	AC69-00042J	PACKING CASE;V-410W,-,-,428,150,YEL,-,-,	V-410W
	BY730585	AC69-00042M	PACKING CASE;V-220W,-,-,428,150,YEL,-,-,	V-220W
	BY730583	AC69-00042K	PACKING CASE;V-210W,-,-,428,150,YEL,-,-,	V-210W
A702	BY730464	AC69-00041A	CUSHION-F/B;M-656/TSB,EPS,-,-,-,-,-	"EF" Models Only
	BY730125	AC69-20362A	CUSHION-F/B;M-685,EPS 58,-,-,-,-,M-685	"UK/EG/W" Models Only
UT01	BY634317	AC59-00015M	REMOCON-ASSY;-,VT-430EF(70148447),-,-,V-	V-430EF
	BY634277	AC59-00015N	REMOCON-ASSY;-,VT-230EF(70148448),-,-,V-	V-230EF/220EF
	BY634312	AC59-00015C	REMOCON-ASSY;-,VT-430UK(70148441),-,-,V-	V-430UK/230UK
	BY634313	AC59-00015D	REMOCON-ASSY;-,VT-220UK(70148442),-,-,V-	V-220UK
	BY634314	AC59-00015E	REMOCON-ASSY;-,VT-210UK(70148443),-,-,V-	V-210UK
	BY634315	AC59-00015G	REMOCON-ASSY;-,VT-430EG(70148437),-,-,V-	V-430EG/230EG
	BY634316	AC59-00015H	REMOCON-ASSY;-,VT-210EG(70148438),-,-,V-	V-210EG
	BY634318	AC59-00015Q	REMOCON-ASSY;-,VT-410W(70148450),-,-,V-4	V-420W/410W
	BY634319	AC59-00015R	REMOCON-ASSY;-,VT-210W(70148451),-,-,V-2	V-220W/210W
Y101	BY634303	AC68-00642A	MANUAL USERS;V-230EF/TSB,-,-,-,-,-,-,-	V-430EF/230EF
	BY634281	AC68-00643A	MANUAL USERS;V-220EF/TSB,-,-,-,-,-,-,-	V-220EF
	BY634304	AC68-00650A	MANUAL USERS;V-430UK/TSB,-,-,-,-,-,-,-	V-430UK/230UK
	BY634301	AC68-00661A	MANUAL USERS;V-220UK/TSB,-,-,-,-,-,-,-	V-220UK
	BY634305	AC68-00653A	MANUAL USERS;V-210UK/TSB,-,-,-,-,-,-,-	V-210UK
	BY634306	AC68-00656A	MANUAL USERS;V-430EG/TSB,-,-,-,-,-,-,-	V-430EG/230EG
	BY634307	AC68-00658A	MANUAL USERS;V-210EG/TSB,-,-,-,-,-,-,-	V-210EG
	BY634309	AC68-00667A	MANUAL USERS;V-410W/TSB,ENG+ITA,-,-,-,-,-	V-420W/410W
	BY634310	AC68-00668A	MANUAL USERS;V-210W/TSB,ENG+ITA,-,-,-,-,-	V-220W/210W
Y102	BY634308	AC68-00664A	MANUAL USERS;V-410W/TSB,RUSIA+SPA,-,-,-,-,-	V-410W
	BY634311	AC68-00671A	MANUAL USERS;V-210W/TSB,RUSIA+SPA,-,-,-,-,-	V-210W
Y103	BY634253	AC39-00017A	CABLE-ETC-RF(PAL);-,MALE/FEMALE,1200MM,R	ALL Models
- INSTRUMENT PARTS -				
1	BY730549	AC97-00672A	ASSY-PANEL FRONT;V-430EF,HIPS 94HB,-	V-430EF
	BY730550	AC97-00673A	ASSY-PANEL FRONT;V-230EF,HIPS 94HB,-	V-230EF
	BY730472	AC97-00674A	ASSY-PANEL FRONT;V-220EF,HIPS 94HB,-	V-220EF
	BY730551	AC97-00685A	ASSY-PANEL FRONT;V-430UK/TSB,HIPS94HB,GR	V-430UK
	BY730552	AC97-00685B	ASSY-PANEL FRONT;V-230UK/TSB,HIPS94HB,GR	V-230UK
	BY730553	AC97-00685C	ASSY-PANEL FRONT;V-220UK/TSB,HIPS94HB,GR	V-220UK
	BY730554	AC97-00685D	ASSY-PANEL FRONT;V-210UK/TSB,HIPS94HB,GR	V-210UK
	BY730555	AC97-00685E	ASSY-PANEL FRONT;V-430EG/TSB,HIPS94HB,87	V-430EG
	BY730556	AC97-00685F	ASSY-PANEL FRONT;V-230EG/TSB,HIPS94HB,87	V-230EG
	BY730557	AC97-00685G	ASSY-PANEL FRONT;V-210EG/TSB,HIPS94HB,87	V-210EG
	BY730560	AC97-00685N	ASSY-PANEL FRONT;HIPS94HB,V-420W/TSB,874	V-420W
	BY730558	AC97-00685H	ASSY-PANEL FRONT;V-410W/TSB,HIPS94HB,GRA	V-410W
	BY730561	AC97-00685P	ASSY-PANEL FRONT;HIPS94HB,V-220W/TSB,87	V-220W
	BY730559	AC97-00685J	ASSY-PANEL FRONT;V-210W/TSB,HIPS94HB,GRA	V-210W
21	BY730562	AC64-00135H	DOOR-CASSETTE;-,ABS94HB BRN,-,-,-,SILVER	V-430EF
	BY730563	AC64-00135J	DOOR-CASSETTE;-,ABS94HB BRN,-,-,-,SILVER	V-230EF
	BY730461	AC64-00135K	DOOR-CASSETTE;-,ABS94HB BRN,-,-,-,SILVER	V-220EF
	BY730568	AC64-52175T	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-430UK
	BY730569	AC64-52175U	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-230UK
	BY730570	AC64-52175V	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-220UK
	BY730571	AC64-52175W	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-210UK
	BY730572	AC64-52175X	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-430EG
	BY730573	AC64-52175Y	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-230EG
	BY730574	AC64-52175Z	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-210EG
	BY730566	AC64-00310F	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-420W
	BY730564	AC64-00310A	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-410W
	BY730567	AC64-00310G	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-220W
	BY730565	AC64-00310B	DOOR-CASSETTE;-,ABS94HB,-,T2.5,-,BLK,-,V	V-210W
22	BY730093	AC61-62032A	SPRING-MASK;X-9,-,SUS,-,4.4,-,SV-C130	ALL Models
101	BY730313	AC64-30899C	CABINET-TOP-ASSY;-,PCM(SECC),-,0.525,380	V-430EF/230EF/220EF
	BY730312	AC64-30899B	CABINET-TOP;V-629G/TSB,PCM MD552,SECC,T0	V-430UK/230UK/220UK/210UK
	BY730314	AC64-30899D	CABINET-TOP-ASSY;-,PCM(SECC),-,0.525,380	V-430EG/230EG/210EG
	BY730314	AC64-30899D	CABINET-TOP-ASSY;-,PCM(SECC),-,0.525,380	V-420W/220W
	BY730312	AC64-30899B	CABINET-TOP;V-629G/TSB,PCM MD552,SECC,T0	V-410W/210W
102	BY730280	AC63-32128A	COVER-BOTTOM;SV-C140F,SECC,387.7X197.6,T	ALL Models

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
153	70790218	AC60-12126A	SCREW-BH;-,BH,-,4*12,FE,FZY,-,-,-	ALL Models
155	70790082	AC60-12134A	SCREW-TAP BH;-,BH,-2-4X16,-,FE	ALL Models
156	BY730204	AC60-00001A	SCREW-MACHINE;-,BH,*,4X12,M4,L12,BLK,SMC	ALL Models
157	70790002	AC60-10063A	SCREW-TAPTITE;BH,+,-,M3,L12,ZPC3,SWRCH18	ALL Models
200	BY634124	AC39-10019A	POWER CORD;KKP-419C,H03VVH2-F,VDE/KEMA-K	"EF/EG/W" MODEL Only
	BY634126	AC39-12022K	POWER-CORD;Y352160,H03VVH2-F,-,BS6500,1.	"UK" MODEL Only
CN3A1S	BY634118	3809-001111	CABLE-FLAT;30V,80C,130mm,7P,1.25mm,UL289	ALL Models
CN602A	BY634007	3809-001049	CABLE-FLAT;30V,80C,100MM,5P,1.25MM,UL289	ALL Models
LD601S	BY730082	AC61-21009A	HOLDER-LED;-,POM(M90-44),-,BLK,-,X-9	ALL Models
S601S	BY730080	AC61-21008A	HOLDER-SENSOR;-,POM(M90-44),-,BLK,-,X-9	ALL Models
S602S	BY730080	AC61-21008A	HOLDER-SENSOR;-,POM(M90-44),-,BLK,-,X-9	ALL Models
TM401B	BY730222	AC61-11061D	CONNECTOR BOARD-ASSY;V-629B/TSB,HIPS94,H	V-430EF/230EF/220EF
	BY730224	AC61-11061F	CONNECTOR BOARD-ASSY;V-429B/TSB,HIPS94,H	V-430UK/230UK.220UK
	BY730225	AC61-11061G	CONNECTOR BOARD-ASSY;V-209B/TSB,HIPS94,H	V-210UK
	BY730223	AC61-11061E	CONNECTOR BOARD-ASSY;V-429G/TSB,HIPS94,H	V-430EG/230EG/210EG
	BY730223	AC61-11061E	CONNECTOR BOARD-ASSY;V-429G/TSB,HIPS94,H	V-420W/410W
	BY730225	AC61-11061G	CONNECTOR BOARD-ASSY;V-209B/TSB,HIPS94,H	V-220W/210W

- MECHANICAL PARTS -

B238	BY730087	AC61-50660A	SLEEVE-TENSION;-,POM M90-44,-,-,ID3,-,-,	
B239	BY730234	AC61-21004A	CAP-#8 GUIDE;-,POM M90-44,-,NTR,-,X-9	
B257	BY730247	AC61-50661A	POST-MAIN PCB;-,POM M90-44,-,-,NTR,-,X-9	
B258	BY730266	AC61-50684A	GUIDE-MAIN PCB;-,POM,OD7,L20,-,BLACK,X-9	
B410	BY730456	AC31-12016D	MOTOR-LOADING ASSY;-,SNHNE,-,-	
B440	BY730072	AC60-10515A	SCREW-MACHINE;-,PH,+,-,M3,L3,ZPC,-,YEL	
B444	BY730104	AC66-20571A	GEAR-WORM;-,POM SW-01,0.5,2,-,4.5,X-9	
B446	BY730079	AC61-21005A	HOLDER-WORM;-,POM M90-44,-,-,-,X-9	
B448	BY730105	AC66-20573A	GEAR-WORM WHEEL;-,POM SW-01,0.6,11,-,6.6	
B452	BY730107	AC66-20575A	GEAR-FL CAM;-,POM SW-01,M0.6,Z88,-,PCD58	
B456	BY730108	AC66-20576A	GEAR-JOINT 1;-,POM SW-01,M1.0,Z22,-,PCD2	
B458	BY730106	AC66-20574A	GEAR-JOINT 2;-,POM SW-01,M1.0,Z14,-,PCD1	
B460	BY730447	AC61-11045A	BRACKET-GEAR;-,SECC20/20,-,T1.2,-,-,X-9	
B462	BY730073	AC60-10517A	SCREW-TAP TITE;-,PH,+,-,M2.6,L5,ZPC,-,YE	
B464	BY730381	AC66-80140A	SLIDER-CAM;-,SECC20/20,T1.2,-,-,X-9	
B468	BY730450	AC66-30541A	LEVER-PINCH DR ASSY;-,-,-,-,-,X-9	
B473	BY730090	AC61-60559A	SPRING-PINCH DRIVE;-,TS,SUS304,PI0.5,OD4	
B474	BY730244	AC61-30180A	PLATE-JOINT;-,SECC20/20,T0.8,-,X-9	
B478	BY730449	AC66-30540A	LEVER-TENS DR ASSY;-,-,-,-,-,X-9	
B484	BY730110	AC66-20580A	GEAR-LOADING DRIVE;-,POM SW-01,M1.0,Z32,	
B488	BY730117	AC66-30543A	LEVER-S LOAD ASSY;-,-,-,-,-,X-9	
B500	BY730116	AC66-30542A	LEVER-T LOAD ASSY;-,-,-,-,-,X-9	
B560	BY730455	AC31-00005A	MOTOR-CAPSTAN;-,F2QSB02,-,-	
B570	BY730071	AC60-10514A	SCREW-CAPSTAN;-,PH,+,M2.6,L6,-	
G001	BY730548	AC97-00564A	ASSY-CYLINDER;CX-9T,SECAM,4HD	V-430EF
	BY730470	AC97-00547A	ASSY-CYLINDER;CX-9T,PAL,2HD	V-230EF/220EF
	BY730546	AC97-00549A	ASSY-CYLINDER;CX-9T,PAL,4HD	V-430UK/430EG/420W/410W
	BY730547	AC97-00555A	ASSY-CYLINDER;CX-9T,PAL,2HD(LP)	V-230UK/220UK/210UK/230EG/210EG/220W/210W
G420	BY730124	AC66-80142A	SLIDER-SUPPLY ASSY;-,X-9(TS),-,-,-,X-9	
G428	BY730451	AC66-40153A	ROLLER-SUPPLY ASSY;-,VW-32,OD7,-,X-9	
G450	BY730123	AC66-80141A	SLIDER-TAKE UP ASSY;-,X-9(TS),-,-,-,X-9	
G458	BY730452	AC66-40154A	ROLLER-TAKE UP ASSY;-,VW-32,OD7,-,X-9	
G480	BY730052	AC33-00003A	HEAD-ACE-ASSY;SHINHEUNG,-,-,-,-,X-9	
G510	BY730479	6006-001075	SCREW-ASS'Y TAPT;WSP,PH,+,M2.6,L5.0,ZPC(	
G520	BY730115	AC66-30539A	LEVER-#9 GUIDE ASSY;-,X-9(TS),-,-,-,X-9	
G527	BY730088	AC61-60553A	SPRING-#9 GUIDE;-,ES,SUS304-WPB,OD3.1,0.	
G530	BY730053	AC33-00002A	HEAD-FE;-,HVFHP0038A,-,-,-,X-9	
G532	BY730075	AC60-10519A	SCREW-TAP TITE;-,PH,+,-,M2.6,L8,ZPC	
G542	BY730122	AC66-60051A	BELT-PULLEY;-,5CM-70,2 * 2,-,71.3,-,X-9	
G546	BY730113	AC66-30535A	LEVER-FL DOOR;-,POM M90-44,-,-,BLK,X-9	
G555	BY730070	AC59-90403A	UNIT-PINCH ASSY;X-9,-	
G680	BY730372	AC66-30557A	LEVER-H/CLEANER ASSY;-,POM+URETHANE,-,-,	
K110	BY730102	AC66-10267A	REEL-DISK S;-,POM M90-44,-,-,X-9	
K140	BY730103	AC66-10268A	REEL-DISK T;-,POM M90-44,-,-,X-9	
K180	BY730369	AC66-30548A	LEVER-IDLER ASSY;-,POM+NYLON,-,-,-,X-9	
K182	BY730112	AC66-30524A	LEVER-IDLER;-,POM9044,-,-,-,-	
K188	BY730109	AC66-20577A	GEAR-IDLER;-,PEBAX 7033,-,-,-,-,X-9	
K200	BY730084	AC61-21012A	HOLDER-CLUTCH ASSY;-,-,-,-,-,X-9	
K221	BY730111	AC66-20581A	GEAR-CENTER ASSY;-,POM,M=0.5,-,HIGHT T.,	
K222	BY730076	AC60-30306A	WASHER-SLIT;-,-,ID2.1,OD5.0,T0.5,-,POLYS	
K225	BY730119	AC66-30547A	LEVER-UP DOWN ASSY;-,POM+SUS,-,-,-,X-9	
K240	BY730114	AC66-30538A	LEVER-TENSION ASSY;-,X-9(TS),-,-,-,X-9	
K248	BY730089	AC61-60554A	SPRING-TENSION LEVER;-,ES,SUS304-WPB,OD3	
K250	BY730094	AC63-12029A	BAND-BRAKE ASSY;-,X-9(TS),-,-,-,X-9	
K330	BY730121	AC66-30550A	LEVER-S.BRAKE ASSY;-,POM+SUS,-,-,-,X-9	
K340	BY730120	AC66-30549A	LEVER-T.BRAKE ASSY;-,POM+SUS,-,-,-,X-9	
K350	BY730092	AC61-60564A	SPRING-BRAKE;-,TENSION,SWP-A,0.25,3,-,X-	
K470	BY730454	AC66-80139A	SLIDER-FL DRIVE;-,SECC E20/20,T1.2,-,-,X	
K490	BY730083	AC61-21010B	HOLDER-CASS ASSY;-,SECC+POM+SUS,-,-,SEIN	
K502	BY730091	AC61-60561A	SPRING-FL.LEVER-LR;-,ES,SUS304 WPB,PI2.7	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
K530	BY730118	AC66-30546A	LEVER-FL.ARM ASS'Y,-,SECC+POM+SUS,-,-,-,	
K546	BY730086	AC61-50658A	GUIDE-CASS. DOOR;-,POM M90-44,-,-,NTR,-,	

- ELECTRICAL PARTS -

601	BY630116	AC92-00308A	ASSY-PCB-MAIN;V-430EF/TSB,MONO	V-430EF
	BY630127	AC92-00555A	ASSY PCB-MAIN;V-230EF/TSB,MONO	V-230EF
	BY630089	AC92-00309A	ASSY-PCB-MAIN;V-220EF/TSB,MONO	V-220EF
	BY630119	AC92-00315A	ASSY-PCB-MAIN;V-430UK/TSB,MONO	V-430UK
	BY630120	AC92-00316A	ASSY-PCB-MAIN;V-230UK/TSB,MONO	V-230UK/220UK
	BY630121	AC92-00317A	ASSY-PCB-MAIN;V-210UK/TSB,MONO	V-210UK
	BY630124	AC92-00320A	ASSY-PCB-MAIN;V-430EG/TSB,MONO	V-430EG
	BY630123	AC92-00319A	ASSY-PCB-MAIN;V-230EG/TSB,MONO	V-230EG
	BY630122	AC92-00318A	ASSY-PCB-MAIN;V-210EG/TSB,MONO	V-210EG
	BY630117	AC92-00311A	ASSY-PCB-MAIN;V-410W/TSB,MONO	V-420W/410W
	BY630118	AC92-00312A	ASSY-PCB-MAIN;V-210W/TSB,MONO	V-220W/210W
701	BY630126	AC92-00430A	ASSY-PCB-VFD-AVLINK;V-430EF/TSB,VFD AVLI	V-430EF/230EF
	BY630090	AC92-00324A	ASSY-PCB-VFD-Only;V-610EF/TSB,VFD-Only	V-220EF
	BY630099	AC92-00325A	ASSY-PCB-VFD-AVLINK;V-730EF/TSB,VFD-AVLI	V-430UK/230UK/220UK/430EG/230EG
	BY630113	AC92-00509A	ASSY-PCB-VFD;V-510EF,V-720UK,VFD-Only,TS	V-210UK/210EG/420W/410W/220W/210W
702	BY630125	AC92-00429A	ASSY-PCB-F/AV-MONO;V-430EF/TSB,F/AV MONO	V-430EF/230EF
	BY630065	AC92-00033A	ASSY-OPT PCB-MAIN;CBC FRONT,TSB PAL COBR	V-430UK/230UK/220UK/430EG/230EG
	BY630079	AC92-00101A	ASSY-PCB-SUB;V-429F/TSB,CBC3	V-420W/410W/220W/210W

<INTERGRATED CIRCUITS>

IC1SF1	BY631087	1203-001802	IC-PWM CONTROLLER;STR-G6551,TO-220F,5P,-	
IC1SS1	BY530004	0604-001028	PHOTO-COUPLER;TR,50-600%,250mW,DIP-4,ST	
IC1SS2	BY631008	AC14-12006D	IC;KA431Z,TO-92,TAPING	⚠
IC301	BY631049	1204-001649	IC-VIDEO PROCESS;LA71598M,QFP,100P,-,PLA	
IC3S01	BY631062	1204-001437	IC-CHROMA;LA7359,DIP,28P,400MIL,PLASTIC,	"EF" Models Only
IC601	BY631092	AC09-00109A	IC-MICOM;uPD784927GF-155-3BA,784927GF-1	
IC602	BY631022	1003-001162	IC-MOTOR DRIVER;KA3082,SIP,10PIN,25MIL,D	
IC604	70795269	AC14-12006C	IC;KA7533,DIP,-	
IC605	BY631082	1103-001150	IC-EEPROM;24C081,8KBIT,DIP,8P,300MIL,10M	
IC608	BY631059	1203-000515	IC-VOL. DETECTOR;7042,TO-92,3P,177MIL,PL	
IC6P01	BY631068	AC09-12014Z	IC-MCU;LC74776M,30P,MFP,OSD/VPS/PDC I	
IC6P01	BY631066	AC09-10459G	IC-MCU;LC74789YJM-9771,24P,MFP,OSD IC	V-220EF/210UK Only
IC6P01	BY631100	AC09-00115A	IC-OSD;LC74759JM-9792,LC74759JM-9792,	"W" Models Only
IC701	BY631094	AC09-00092A	IC MCU;uPD780232GC-014-8BT,uPD780232G	
IC801	BY631064	1205-001484	IC-SWITCH;LA7147M,SOP,36PIN,375MIL,PLAST	V-220W/210W/210UK Not used

<TRANSISTORS>

Q1P101	70693265	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
Q1P102	70693265	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
Q1P104	70693410	0501-000610	TR-SMALL SIGNAL;KSA928A-Y,PNP,1W,TO-92L,	
Q1P105	70795137	0504-000116	TR-DIGITAL;KSR1001,NPN,300MW,4.7K/4.7K,T	
Q1P106	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q1P107	70795818	0501-000290	TR-SMALL SIGNAL;KSA643-Y,PNP,500mW,TO-92	
Q1P110	70795137	0504-000116	TR-DIGITAL;KSR1001,NPN,300MW,4.7K/4.7K,T	
Q1P111	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
Q1P112	70795818	0501-000290	TR-SMALL SIGNAL;KSA643-Y,PNP,500mW,TO-92	
Q1P114	70693265	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
Q1P115	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
Q1P116	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q1P117	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q302	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q303	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q304	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q307	BY530014	0504-000119	TR-DIGITAL;KSR1004,NPN,300MW,47K	V-220W/210W/230UK/220UK/210UK/230EG/210EG Only
Q308	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q309	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q3A01	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q3A03	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3A04	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3A05	70795142	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3A06	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q3S01	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	"EF" Models Only
Q3S02	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	"EF" Models Only
Q3S03	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	"EF" Models Only
Q3S04	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	"EF" Models Only
Q3S05	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	"EF" Models Only
Q602	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q6B01	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	V-430UK/230UK/220UK/430EG/230EG Only
Q6B03	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	V-430UK/230UK/220UK/430EG/230EG Only
Q6B04	70795136	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	V-430UK/230UK/220UK/430EG/230EG Only
Q6P01	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q6P02	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q6P03	70795134	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q701	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
Q802	BY530014	0504-000119	TR-DIGITAL;KSR1004,NPN,300MW,47K/47K,TO-	V-210UK/220W/210W Only

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
Q804	70693084	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	V-210UK/220W/210W Only
S601	BY530003	0603-001011	PHOTO-TR;NPN,35V,6V,50mA,75mW,BK	
S602	BY530003	0603-001011	PHOTO-TR;NPN,35V,6V,50mA,75mW,BK	
<DIODES>				
D1P101	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P103	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P105	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P108	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P109	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P110	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P111	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P113	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P114	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	V-220W/210W/210UK Not used
D1P115	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P117	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1P119	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P120	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D1P125	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D1SD11	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D1SD31	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D1SD32	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D1SF05	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SF12	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D1SS01	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SS02	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SS03	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SS04	BY430012	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D1SS11	BY430008	0402-000276	DIODE-RECTIFIER;UF4007,1KV,1A,DO-41,TP	
D1SS31	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D1SS32	BY430010	0402-001194	DIODE-RECTIFIER;UG2D,200V,2A,DO-204AC,TP	
D1SS33	BY430065	0404-001069	DIODE-SCHOTTKY;B10A45VI,45V,10A,TO-220IS	
D1SS44	BY430011	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
D302	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D3S02	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	"EF" Models Only
D401	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D603	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D604	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D605	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D611	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D620	70796385	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D701	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D702	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D702	BY430014	0403-001141	DIODE-ZENER;MTZJ24D,24V,23.63-24.85V,500	
D703	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D704	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D705	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D706	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D706	BY430004	0403-000509	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
D707	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D708	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D709	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D805	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
LD601	BY430016	0601-000517	LED-IR;RECTANGULA,4x6.0mm,75mW,6V,950	
LD703	BY430066	0601-001201	LED;ROUND,RED,3mm,635nm	
W167	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
W532	70795150	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
ZD1P01	BY430015	0403-001211	DIODE-ZENER;MTZJ12B,11.44-12.03V,500MW,D	
ZD1P02	BY430005	0403-000717	DIODE-ZENER;MTZJ5.1B,5.1V,4.94-5.2V,500m	
ZD1P03	BY430013	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
ZD1P06	BY430015	0403-001211	DIODE-ZENER;MTZJ12B,11.44-12.03V,500MW,D	V-220W/210W/210UK Not used
ZD401	70795272	0403-000390	DIODE-ZENER;UZP33B,33V,31.4-34.6V,1W,DO-	
<INDUCTORS>				
BD1SD1	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
BD1SF1	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
BD1SF3	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
BD1SR1	BY330003	3301-000297	CORE-FERRITE BEAD;AA,3.6x1.2x5.7mm,1400,	
BD1SS2	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
BD1SS3	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
FL3A01	BY330004	AC27-80100A	COIL-OSC;126QN-K5272YHC=K,-,AM	
L1SS02	BY634272	AC29-00002A	FILTER LINE NOISE;-,30mH,-,-,BLF-2116	
L1SS31	70796213	AC27-12001N	COIL-CHOKE;10UH-15%,RA,K-30,Q80,150KHZ,-	⚠
L1SS32	70796213	AC27-12001N	COIL-CHOKE;10UH-15%,RA,K-30,Q80,150KHZ,-	
L301	70795841	2701-000206	INDUCTOR-AXIAL;56uH,5%,2.4x3.4mm	
L302	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L304	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L305	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L306	70796361	2701-000119	INDUCTOR-AXIAL;120uH,5%,2.4x3.4mm	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
L310	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L3A01	70795171	2702-000120	INDUCTOR-RADIAL;15mH,5%,6.2x7.4mm	
L3A02	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L3A03	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
L3S01	70796003	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	"EF" Models Only
L3S02	70795863	2702-000179	INDUCTOR-RADIAL;6.8uH,5%,6x6.4mm	"EF" Models Only
L3S03	BY330052	2701-000165	INDUCTOR-AXIAL;27uH,5%,2.4x3.4mm	"EF" Models Only
L3S04	70795843	2701-000195	INDUCTOR-AXIAL;47uH,5%,2.4x3.4mm	"EF" Models Only
L3S05	70795162	2701-000160	INDUCTOR-AXIAL;22uH,5%,2.4x3.4mm	"EF" Models Only
L401	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L601	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L603	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L604	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L605	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L6B01	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	V-430UK/230YK/220UK/430EG/230EG Only
L6P03	70795162	2701-000160	INDUCTOR-AXIAL;22uH,5%,2.4x3.4mm	
L6P04	BY330054	2701-000201	INDUCTOR-AXIAL;5.6uH,5%,2.4x3.4mm	
L6P05	BY330052	2701-000165	INDUCTOR-AXIAL;27uH,5%,2.4x3.4mm	
L701	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	V-430EF/230EF/420W/410W/220W/210W Only
L702	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L801	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	V-220W/210W/210UK Not used
L802	BY330009	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	V-220W/210W/210UK Not used
L803	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L804	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L805	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	V-220W/210W/430UK/230UK/220UK/210UK Not used
L806	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	V-220W/210W/430UK/230UK/220UK/210UK Not used
L807	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L808	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L809	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L810	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
L811	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	V-220W/210W/210UK Not used
L812	BY330053	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	V-220W/210W/210UK Not used
L813	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
L814	70795644	AC27-92001M	INDUCTOR;70UH-M RT BFS3565R2F,-,-,-,-	
<CAPACITORS>				
C1P101	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C1P102	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C1P103	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1P104	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C1P105	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C1P106	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C1P108	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C1P110	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1P114	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1P115	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1P116	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C1SD03	BY130219	2201-000812	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,BK,12.	
C1SD04	BY130219	2201-000812	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,BK,12.	
C1SD11	BY130283	2401-003302	C-AL;47uF,20%,400V,GP,TP,18X31.5,7.	
C1SD12	BY130226	2305-001029	C-FILM,MPEF;10nF,10%,630V,TP,12x9x12.5,5	
C1SD13	70795070	2201-000376	C-CERAMIC,DISC;0.22nF,5%,50V,SL,TP,6.3x3	
C1SF12	BY130296	2401-001200	C-AL;33uF,20%,50V,WT,TP,6.3x11,5	
C1SS01	BY130272	2305-001021	C-FILM,MPEF;100nF,20%,275V,TP,17.5x7x13.	⚠
C1SS02	BY130272	2305-001021	C-FILM,MPEF;100nF,20%,275V,TP,17.5x7x13.	⚠
C1SS12	BY130258	2201-000129	C-CERAMIC,DISC;0.1nF,10%,1kV,Y5P,TP,7x4,	
C1SS31	70795431	2401-000385	C-AL;10uF,20%,100V,GP,TP,6.3x11,5	
C1SS32	BY130281	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
C1SS33	BY130251	2401-003477	C-AL;330UF,20%,25V,LZ,TP,10X12.5MM,	
C1SS34	BY130338	2401-003478	C-AL;100UF,20%,25V,LZ,TP,8X11.5MM,5	
C1SS35	BY130339	2401-003480	C-AL;1000UF,20%,10V,LZ,TP,10X16MM,5	
C1SS36	BY130015	2401-001479	C-AL;470uF,20%,10V,GP,-,-,TP	
C1SS37	BY130281	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
C1SS38	BY130015	2401-001479	C-AL;470uF,20%,10V,GP,-,-,TP	
C1SS39	70796098	2301-000129	C-FILM,PEF;100nF,5%,50V,TP,10X9X4.3X5,5m	
C1SS40	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	
C301	70795769	2401-001919	C-AL;2.2UF,20%,50V,-,TP,4X7MM,5	
C302	BY130024	2301-000283	C-FILM,PEF;47nF,5%,100V,TP,7.3X7X3.2X5,5	
C303	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C304	70795080	2202-000216	C-CERAMIC,MLC-AXIAL;.027NF,5%,50V,SL,TP,	
C305	70697011	2202-000164	C-CERAMIC,MLC-AXIAL;.18NF,10%,50V,Y5P,TP	
C306	BY130263	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C307	70795076	2202-000162	C-CERAMIC,MLC-AXIAL;.015NF,5%,50V,SL,TP,	
C308	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C309	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C310	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C311	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C312	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	V-430EF/230EF/420W/410W/220W/210W Only
C313	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
C314	BY130278	2401-001775	C-AL;470nF,20%,50V,GP,TP,4x7,5	
C315	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C316	BY130167	2202-002055	C-CERAMIC,MLC-AXIAL;47nF,+80-20%,50V,Y5V	
C318	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C320	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C321	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C322	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C323	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C324	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C325	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C326	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C327	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C328	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C329	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C330	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C331	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C332	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C333	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C334	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C335	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C336	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C337	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C338	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C339	BY130167	2202-002055	C-CERAMIC,MLC-AXIAL;47nF,+80-20%,50V,Y5V	
C340	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C341	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C342	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C343	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C345	BY130260	2201-002031	C-CERAMIC,DISC;0.005nF,0.5pF,50V,NP0,TP,	
C346	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C347	BY130173	2202-000286	C-CERAMIC,MLC-AXIAL;56pF,5%,50V,SL,TP,1.	
C348	BY130173	2202-000286	C-CERAMIC,MLC-AXIAL;56pF,5%,50V,SL,TP,1.	
C349	BY130265	2202-000849	C-CERAMIC,MLC-AXIAL;18pF,5%,50V,CH,TP,3.	
C350	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C360	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	V-430EF/230EF/420W/410W/220W/210W Only
C380	70795616	2202-000243	C-CERAMIC,MLC-AXIAL;33pF,5%,50V,SL,TP,3.	
C381	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C390	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C399	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A01	70795626	2401-003122	C-AL;4.7uF,20%,50V,LL,TP,4X7,1.5	
C3A02	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A04	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A07	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	
C3A08	BY130041	2301-001014	C-FILM,PEF;6.8nF,5%,50V,TP,7x3x6,5mm	
C3A09	BY130041	2301-001014	C-FILM,PEF;6.8nF,5%,50V,TP,7x3x6,5mm	
C3A10	BY130085	2301-000314	C-FILM,PEF;8.2nF,5%,50V,TP,6.5x3.0x5.5mm	
C3A11	BY130145	2301-000253	C-FILM,PEF;39NF,5%,100V,TP,7.5X4.5X12.5M	
C3A12	BY130282	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C3A13	BY130269	2301-000161	C-FILM,PEF;12nF,5%,50V,TP,6.5X5.5X3.0X5,	
C3A14	BY130041	2301-001014	C-FILM,PEF;6.8nF,5%,50V,TP,7x3x6,5mm	
C3A15	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	
C3A16	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C3A17	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C3A18	70795094	2301-000402	C-FILM,PEF;1nF,5%,50V,TP,5x7x2.8mm,5mm	
C3A21	BY130267	2301-000008	C-FILM,PEF;2.2nF,5%,50V,TP,5.5X7X3,5mm	
C3A22	70699002	2202-000780	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	V-220W/210W/210UK Only
C3A23	BY130250	2401-002068	C-AL;33uF,20%,16V,GP,TP,5x11,5	
C3A24	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A25	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C3A29	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C3A30	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C3A31	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	V-430EF/230EF/420W/410W/220W/410W Only
C3S01	70697011	2202-000164	C-CERAMIC,MLC-AXIAL;.18NF,10%,50V,Y5P,TP	"EF" Models Only
C3S02	70795769	2401-001919	C-AL;2.2UF,20%,50V,-,TP,4X7MM,5	"EF" Models Only
C3S03	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	"EF" Models Only
C3S04	70796389	2301-000381	C-FILM,PEF;10nF,5%,50V,TP,6.5x5.5x3mm,5m	"EF" Models Only
C3S05	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	"EF" Models Only
C3S06	70795363	2202-000791	C-CERAMIC,MLC-AXIAL;150pF,10%,50V,Y5P,TP	"EF" Models Only
C3S07	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	"EF" Models Only
C3S08	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	"EF" Models Only
C3S09	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	"EF" Models Only
C3S11	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	"EF" Models Only
C3S13	BY130278	2401-001775	C-AL;470nF,20%,50V,GP,TP,4x7,5	"EF" Models Only
C3S14	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	"EF" Models Only
C3S15	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	"EF" Models Only
C3S17	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	"EF" Models Only
C3S19	70795070	2201-000376	C-CERAMIC,DISC;0.22nF,5%,50V,SL,TP,6.3x3	"EF" Models Only
C3S20	BY130082	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5	"EF" Models Only
C3S21	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	"EF" Models Only

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
C3S22	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	"EF" Models Only
C3S23	70693492	2201-000941	C-CERAMIC,DISC;51pF,5%,50V,SL,TP,5x3,5	"EF" Models Only
C3S25	70693215	2202-000787	C-CERAMIC,MLC-AXIAL;10PF,5%,50V,Y5P,TP,3	"EF" Models Only
C3S26	70795729	2201-000681	C-CERAMIC,DISC;0.082nF,5%,50V,SL,TP,5x3,	"EF" Models Only
C3S27	70693237	2202-000825	C-CERAMIC,MLC-AXIAL;680pF,10%,50V,Y5P,TP	"EF" Models Only
C402	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C403	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C404	70795123	2401-001085	C-AL;330NF,20%,50V,GP,-,5X9,2MM	
C405	BY130281	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
C407	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C410	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C529	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C601	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C602	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C603	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C604	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C605	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C607	BY130278	2401-001775	C-AL;470nF,20%,50V,GP,TP,4x7,5	
C608	BY130131	2401-002259	C-AL;0.1F,+80-20%,5.5V,-,TP,12.5x11	"EF" Models Only
C608	70796210	2401-000118	C-AL;1000uF,20%,10V,GP,TP,10x12.5,5	
C610	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C611	70693281	2301-000392	C-FILM,PEF;15nF,5%,50V,TP,6.5x8.5x3.2mm,	
C612	70796210	2401-000118	C-AL;1000uF,20%,10V,GP,TP,10x12.5,5	
C614	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C618	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C619	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C620	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C621	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C622	70693497	2301-000471	C-FILM,PEF;68nF,5%,50V,TP,9x12x4.5mm,5mm	
C623	70693249	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C624	70795614	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
C625	70795614	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
C626	70795614	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
C627	70795614	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
C628	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C633	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C634	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C635	BY130072	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP	
C636	BY130072	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP	
C637	BY130172	2202-000263	C-CERAMIC,MLC-AXIAL;470pF,10%,50V,Y5P,TP	
C638	70699092	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C639	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
C640	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C641	BY130280	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C642	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C643	BY130048	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5mm	
C645	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C646	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C691	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C692	70693497	2301-000471	C-FILM,PEF;68nF,5%,50V,TP,9x12x4.5mm,5mm	
C6B02	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	V-430UK/230UK/220UK/430EG/230EG Only
C6B03	70795621	2401-001507	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	V-430UK/230UK/220UK/430EG/230EG Only
C6B04	70699002	2202-000780	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	V-430UK/230UK/220UK/430EG/230EG Only
C6B07	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C6B08	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C6P01	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C6P02	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C6P03	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C6P04	70795080	2202-000216	C-CERAMIC,MLC-AXIAL;.027NF,5%,50V,SL,TP,	
C6P05	70795080	2202-000216	C-CERAMIC,MLC-AXIAL;.027NF,5%,50V,SL,TP,	
C6P06	BY130271	2301-000458	C-FILM,PEF;56nF,5%,50V,TP,8x12x4.5mm,5mm	V-220EF/420W/410W/220W/210W/210UK Not used
C6P07	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	V-220EF/420W/410W/220W/210W/210UK Not used
C6P08	BY130173	2202-000286	C-CERAMIC,MLC-AXIAL;56pF,5%,50V,SL,TP,1.	
C6P09	BY130170	2202-000145	C-CERAMIC,MLC-AXIAL;.12NF,10%,50V,Y5P,TP	V-220EF/420W/410W/220W/210W/210UK Only
C6P10	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C6P11	BY130042	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C6P12	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C6P13	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C6P14	70693047	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
C6P20	70693047	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
C6P20	70795082	2202-000295	C-CERAMIC,MLC-AXIAL;68pF,5%,50V,SL,TP,3.	V-220EF/420W/410W/220W/210W/210UK Only
C701	BY130280	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C702	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C703	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C706	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C707	70795626	2401-003122	C-AL;4.7uF,20%,50V,LL,TP,4X7,1.5	
C708	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C711	70795362	2202-000789	C-CERAMIC,MLC-AXIAL;12PF,5%,50V,SL,TP,3.	
C712	70795362	2202-000789	C-CERAMIC,MLC-AXIAL;12PF,5%,50V,SL,TP,3.	

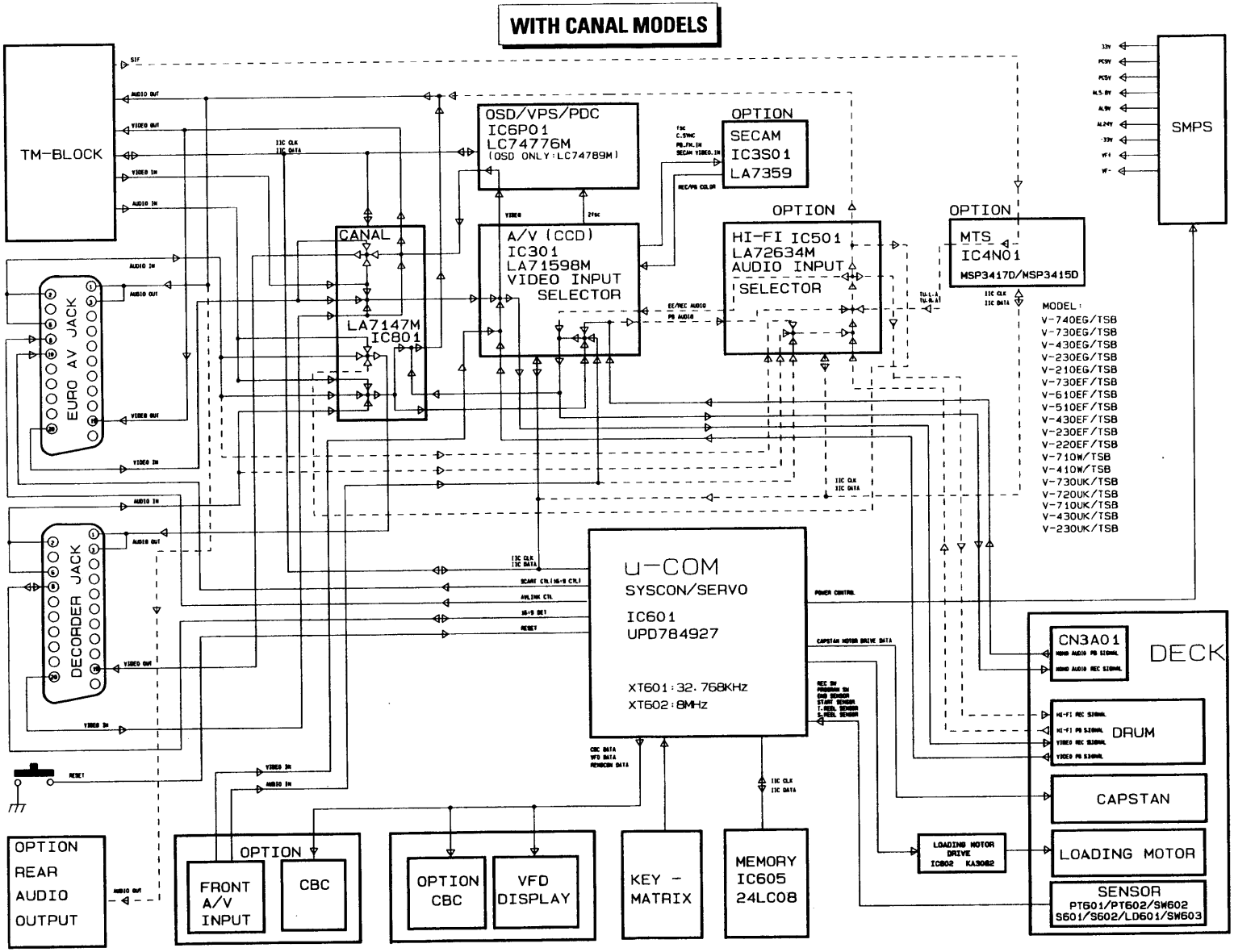
Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
C801	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	V-220W/210W/210UK Not used
C803	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	V-220W/210W/210UK Not used
C805	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	V-220W/210W/210UK Not used
C807	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	V-220W/210W/210UK Not used
C808	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	V-220W/210W/210UK Not used
C809	70795769	2401-001919	C-AL;2.2UF,20%,50V,-,TP,4X7MM,5	V-220W/210W/210UK Not used
C810	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	V-220W/210W/210UK Not used
C814	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	V-220W/210W/210UK Not used
C815	BY130047	2401-002075	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	V-220W/210W/210UK Not used
C816	BY130273	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	V-220W/210W/210UK Not used
C817	BY130049	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	V-220W/210W/210UK Not used
C818	70795075	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	V-220W/210W/210UK Not used
C819	BY130280	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	V-220W/210W/210UK Not used
C820	BY130027	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	V-220W/210W/210UK Not used
C821	BY130015	2401-001479	C-AL;470uF,20%,10V,GP,-,-,TP	
C822	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
C823	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	V-220W/210W/210UK Not used
C826	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	V-220W/210W/430UK/230UK/220UK/210UK Not used
C827	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	V-220W/210W/210UK Not used
C828	70693047	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
C829	70693047	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
C830	BY130136	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C831	BY130263	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C834	BY130263	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	V-220W/210W/430UK/230UK/220UK/210UK Not used
C837	BY130262	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C840	BY130015	2401-001479	C-AL;470uF,20%,10V,GP,-,-,TP	V-220W/210W/430UK/230UK/220UK/210UK Not used
C841	BY130069	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	V-220W/210W/210UK Only
<RESISTORS>				
R1P103	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P105	70795007	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P106	70795036	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P107	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P108	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P109	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P110	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P111	70795003	2001-000302	R-CARBON;10OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P112	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P115	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P116	70795029	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P117	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P119	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P121	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1P122	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P123	70795007	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P125	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P127	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P128	70795013	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1P129	BY230106	2001-000938	R-CARBON;68OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
R1P130	BY230019	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SD12	70796067	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SD13	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SD14	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SD15	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SD16	70796274	2003-000273	R-METAL OXIDE;33Kohm,5%,2W,AA,TP,6x16mm	
R1SD31	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SD32	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SF11	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SF15	70795031	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R1SF19	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SF20	BY230147	2003-000105	R-METAL OXIDE;0.33ohm,5%,2W,AD,TP,6x16mm	
R1SF21	BY230036	2001-000096	R-CARBON(S);1MOHM,5%,1/2W,AA,TP,2.4X6.4M	
R1SS10	BY230170	2006-000262	R-CEMENT;2.7ohm,10%,2W,CB,TP,7.5x11x20.	
R1SS11	70796274	2003-000273	R-METAL OXIDE;33Kohm,5%,2W,AA,TP,6x16mm	
R1SS13	BY230003	2003-000148	R-METAL OXIDE;100OHM,5%,2W,AE,TP,6X16MM	
R1SS31	70795009	2001-000440	R-CARBON;1OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SS32	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R1SS33	70795640	2004-000869	R-METAL;3Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
R1SS34	70795638	2004-000459	R-METAL;2.2Kohm,1%,1/8W,AA,TP,1.8x3.2m	
R301	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R302	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R303	70795357	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R304	70795058	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R305	70795357	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R306	70795012	2001-000232	R-CARBON;1.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R308	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R309	BY230037	2001-000723	R-CARBON;4.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R311	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R312	70795013	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
R313	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R314	70795050	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R315	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R316	BY230019	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R317	70795030	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R318	70795030	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R320	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R321	BY230096	2001-000009	R-CARBON;20KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R322	70795319	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R324	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP	V-220W/210W/230UK/220UK/210UK/230EG/210EG Only
R325	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R326	70795043	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R327	70795043	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R328	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R329	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R329	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,	V-220W/210W/230UK/220UK/210UK/230EG/210EG Only
R330	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R331	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R332	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R333	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R334	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R335	70795044	2001-000800	R-CARBON;5.1KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R336	70795014	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R341	70795059	2001-001000	R-CARBON;82KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R342	70795046	2001-000802	R-CARBON;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R344	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,	V-430EF/230EF/420W/410W/220W/210W Only
R347	70795049	2001-000904	R-CARBON;620OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R348	70795609	2001-000605	R-CARBON;3.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A01	70795011	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A04	70795012	2001-000232	R-CARBON;1.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A05	70795032	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A06	70795607	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A07	70795033	2001-000645	R-CARBON;330KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A08	70795011	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A09	70795046	2001-000802	R-CARBON;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R3A10	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A11	70795357	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A12	70796025	2001-000458	R-CARBON;2.2OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A13	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A14	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A16	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A17	70795036	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A18	70795036	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A19	70795607	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A21	70795049	2001-000904	R-CARBON;620OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A22	BY230037	2001-000723	R-CARBON;4.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A23	70795058	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A24	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A25	BY230019	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A26	70795011	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A27	70795447	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	V-220W/210W/210UK Only
R3A28	70795447	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A28	70795036	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	V-220W/210W/430UK/230UK/220UK/210UK Only
R3A29	70795036	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	V-430EF/230EF/420W/410W/220W/210W Only
R3A30	70795354	2001-000773	R-CARBON;470KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A31	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Only
R3A32	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A33	70795038	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	V-430EF/230EF/420W/410W/220W/210W Only
R3A37	70795055	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3S01	70795319	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S02	70795058	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S03	70795663	2001-001015	R-CARBON;9.1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S04	70795319	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S05	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S11	70795045	2001-000837	R-CARBON;51KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S12	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S13	70795029	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S14	70795051	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S15	70795055	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S16	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S17	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S20	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S21	70795034	2001-000674	R-CARBON;360OHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S22	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S23	70795319	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R3S24	70795015	2001-000356	R-CARBON;150KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S25	70795357	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R3S27	70795318	2001-000319	R-CARBON;120KOHM,5%,1/8W,AA,TP,1.8X3.2M	"EF" Models Only
R401	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

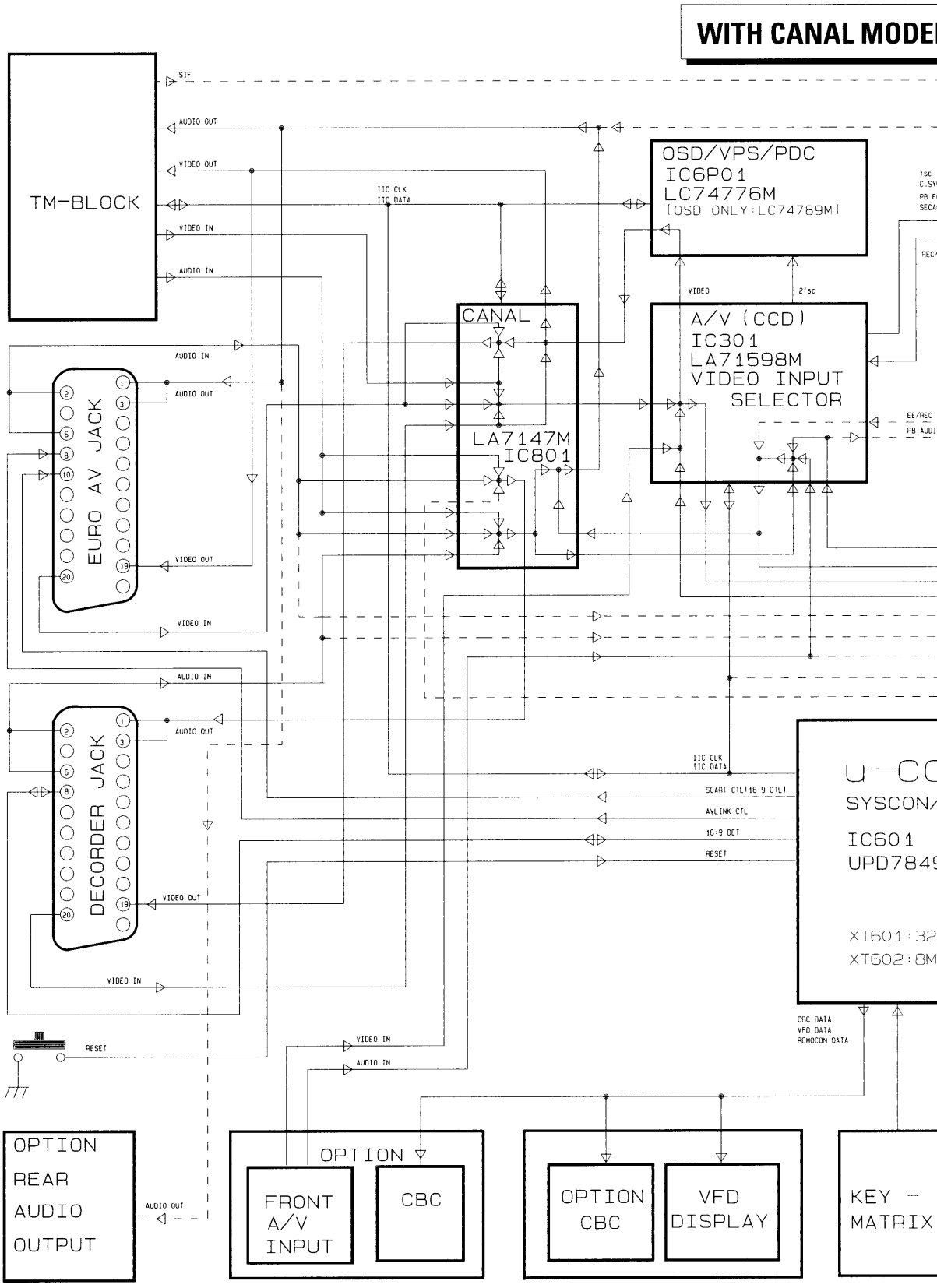
Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
R402	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R403	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R404	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R406	70795026	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R407	70795058	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R408	BY230019	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R602	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R603	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	"EF" Models Only
R603	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R604	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R605	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R608	70795047	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R609	70795047	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R613	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R641	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R642	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R644	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R650	70796369	2003-000259	R-METAL OXIDE;3.9OHM,5%,2W,AE,TP,6X16MM	
R651	70795052	2001-000010	R-CARBON;68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R652	70795024	2001-000568	R-CARBON;27OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R654	70795046	2001-000802	R-CARBON;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R655	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R656	70795013	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R657	70795052	2001-000010	R-CARBON;68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R660	70795041	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R661	70795032	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R666	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R667	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R668	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R669	70795039	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R670	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R671	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R672	70795040	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R673	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R674	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R675	70795607	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R676	70795029	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R677	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R678	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R679	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R682	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R685	70795032	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R687	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R690	70795047	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R691	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R692	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R693	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R694	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6B01	70796024	2001-000384	R-CARBON;160OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-430UK/230UK/220UK/430EG/230EG Only
R6B02	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	V-430UK/230UK/220UK/430EG/230EG Only
R6B03	70795005	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	V-430UK/230UK/220UK/430EG/230EG Only
R6B07	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-430UK/230UK/220UK/430EG/230EG Only
R6P01	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,	V-220EF/420W/410W/220W/210W/210UK Not used
R6P02	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,	V-220EF/420W/410W/220W/210W/210UK Not used
R6P03	70699144	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,	V-220EF/420W/410W/220W/210W/210UK Not used
R6P04	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,	V-220EF/420W/410W/220W/210W/210UK Not used
R6P05	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6P06	70795046	2001-000802	R-CARBON;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	V-220EF/420W/410W/220W/210W/210UK Not used
R6P07	70796356	2001-000490	R-CARBON;200OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6P07	70795659	2001-000027	R-CARBON;100OHM,5%,1/4W,AA,TP,2.4X6.4MM	V-220W/210W/210UK Only
R6P08	70795028	2001-000007	R-CARBON;3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6P09	70795020	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	V-220EF/420W/410W/220W/210W/210UK Only
R6P10	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
R6P11	BY230090	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R706	70795029	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R707	70795013	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R708	70795026	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R709	70795019	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R710	70795008	2001-000435	R-CARBON;1MOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R727	70795014	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R728	70795014	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R731	70795006	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R732	70795003	2001-000302	R-CARBON;100HM,5%,1/8W,AA,TP,1.8X3.2MM	
R801	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
R802	70795004	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
R803	70795057	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R805	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R806	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R807	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc.No.	TSB Parts No.	Reference No.	Description ; Specification	Remark
R808	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R809	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,	V-220W/210W/430UK/230UK/220UK/210UK Not used
R810	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
R811	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
R812	70795054	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R813	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R814	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R815	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R816	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R819	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,	V-220W/210W/430UK/230UK/220UK/210UK Not used
R820	70795025	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,	V-220W/210W/430UK/230UK/220UK/210UK Not used
R821	70795032	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
R822	70795021	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
R823	70795026	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
R824	70795026	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	V-220W/210W/210UK Not used
W421	70795004	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	V-430EF/230EF/420W/410W/220W/210W Only
<MISCELLANEOUS>				
CN1SS1	70796223	3711-000178	CONNECTOR-HEADER;1WALL,2P,1R,3.96mm,STRA	
CN301	70796410	3708-000395	CONNECTOR-FPC/FC/PIC;8P,1.25MM,STRAIGHT,	
CN3A01	BY634038	3708-001302	CONNECTOR-FPC/FC/PIC;7P,1.25mm,STRAIGHT,	
CN3A02	70796246	3711-002445	CONNECTOR-HEADER;BOX,2P,2R,1.5MM,STRAIGH	
CN601	BY634047	AC39-20817S	LEAD CONNECTOR-ASSY;DP,SMH200-02,YBH200-	
CN602	BY634003	3708-001163	CONNECTOR-FPC/FC/PIC;5P,1.25mm,STRAIGHT,	
CN604	BY634026	3711-003749	CONNECTOR-HEADER;BOX,8P,2R,2mm,STRAIGHT,	
CN701	70795274	3711-001198	CONNECTOR-HEADER;NOWALL,10P,1R,2mm,ANGLE	
CN702	70795274	3711-001198	CONNECTOR-HEADER;NOWALL,10P,1R,2mm,ANGLE	
CN704	BY634040	3711-004013	CONNECTOR-HEADER;3WALL,10P,1R,2mm,STRAIG	V-220EF/210UK/210EG Not used
CN705	BY634039	3710-001385	CONNECTOR-SOCKET;10P,1R,2mm,ANGLE,SN	
DT701	BY634119	AC07-20051C	VF-DISPLAY;SVV-07SS27,15SEG,20.5X75.0,SV	
F1SS01	BY634268	3601-001208	FUSE-CARTRIDGE;250V,1.6A,TIME-LAG,GLASS	
JC801	BY634117	3722-001093	JACK-RCA;42P,3.81MM,SN,BLU/BLK,#20-28	2 SCART ⚠
MODELS				
JC801	BY634299	3710-000402	CONNECTOR-SOCKET;6P,2R,3.2mm,STRAIGHT,SN	1 SCART MODELS
JK701	BY634122	AC37-22002S	JACK;3.2mm,DPSM-9827,2P,10mm,ARREY	
PT1SS1	BY634271	AC26-00001L	TRANS-SWITCHING;-,-,-,230V,DEMCO,EE2821,	⚠
PT601	BY530005	0604-001122	PHOTO-INTERRUPTER;TR,0.065%,150mW,DIP-4,	
PT602	BY530005	0604-001122	PHOTO-INTERRUPTER;TR,0.065%,150mW,DIP-4,	
RM701	BY634036	AC59-60060A	MODULE-REMOCON;GP1U281R,SHARP,38KHZ,-,-,	
SW601	BY632004	AC34-20100A	SWITCH-MODE;-,-,X-9,-	
SW602	BY632005	AC34-20100B	SWITCH-REC;-,-,X-9,-	
SW701	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW703	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW708	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW709	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW711	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW712	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW713	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW714	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW715	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW716	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW717	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW718	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW719	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW720	BY632007	3404-000165	SWITCH-TACT;12V,50mA,160gf+-50gf,6x6mm,S	
SW721	70795181	3404-001008	SWITCH-TACT;12V,20mA,160+-50,6x7.9x3.5mm	
SW801	BY632010	3404-000135	SWITCH-TACT;12V,50mA,160+-50gf,7.4x7.1mm	
TM401	BY630052	AC40-30072F	TM-BLOCK;TCMM0601PD08A,SECAM-L/G/I/K,181	"EF" Models Only
TM401	BY630051	AC40-30072D	TM-BLOCK;TCMK0600PD08A,PAL-BG/I/DK,181C	
VA1SS1	BY634022	1405-001026	VARISTOR;470V,600A,9x7mm,TP	⚠
XT301	BY633009	2801-001397	CRYSTAL-UNIT;4.433619MHZ,HC-49/U-S 15PPM	
XT601	BY633003	2801-003318	CRYSTAL-UNIT;32.768KHz,20ppm,28-AAP,12.5	
XT602	BY633010	2801-003139	CRYSTAL-UNIT;8MHz,50ppm,28-AAA,22pF,80oh	
XT701	BY633014	2801-003868	CRYSTAL-UNIT;5MHz,30ppm,28-AAA,12pF,100o	

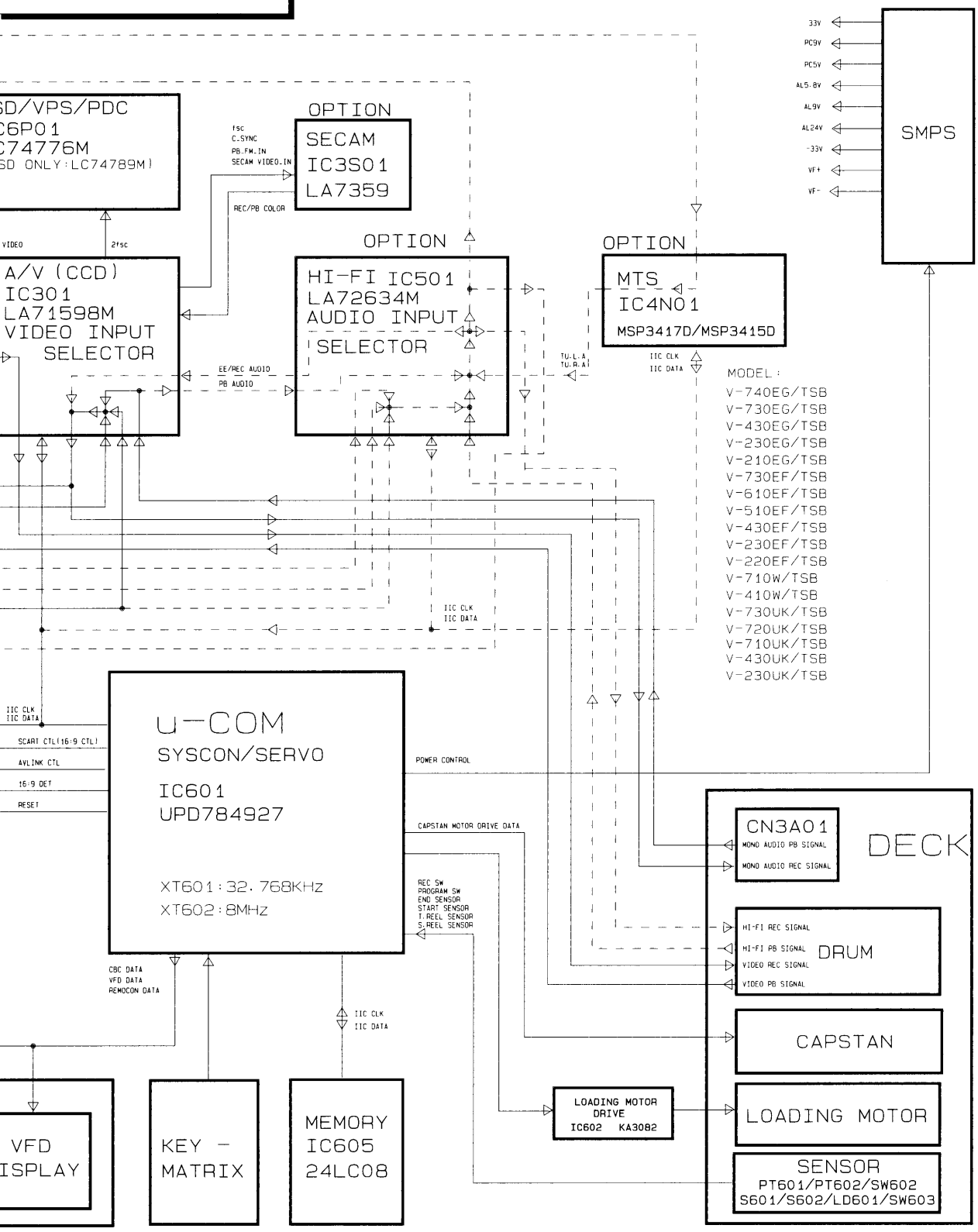
8. Block Diagrams



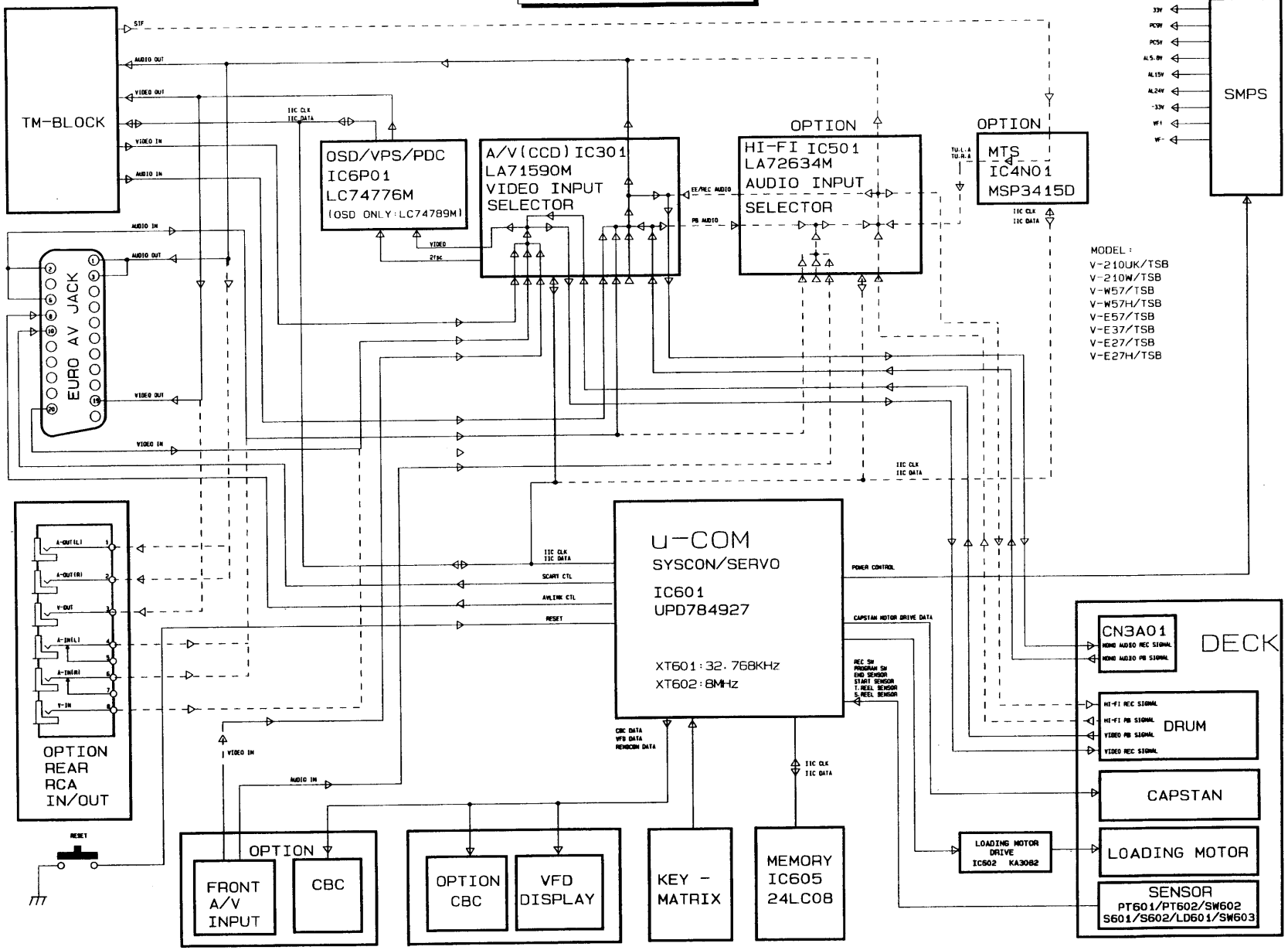
8. Block Diagrams

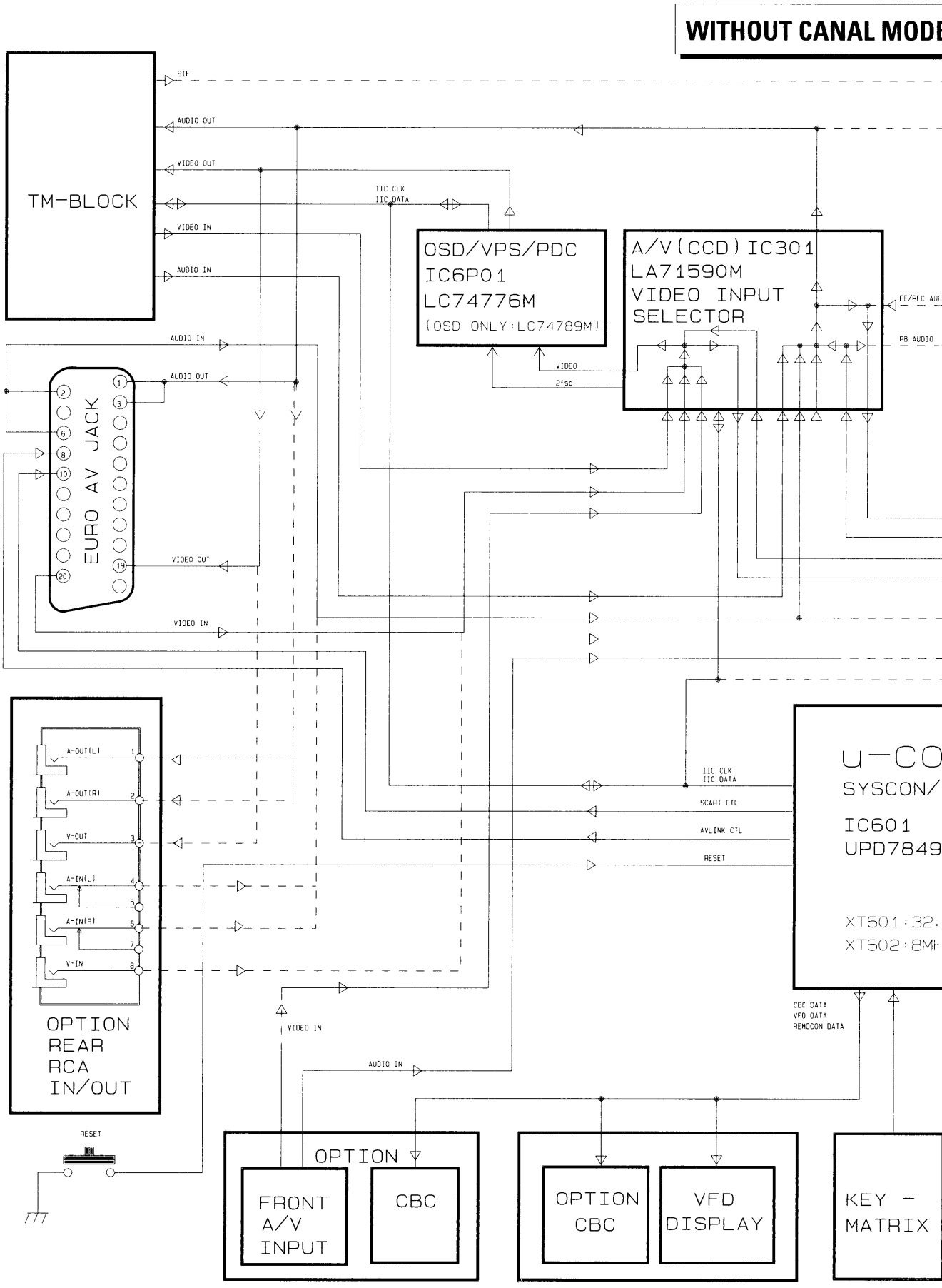


WITH CANAL MODELS



WITHOUT CANAL MODELS




WITHOUT CANAL MODE
TM-BLOCK
SIF
AUDIO OUT
VIDEO OUT
VIDEO IN
AUDIO IN
IIC CLK
IIC DATA
OSD/VPS/PDC
IC6P01
LC74776M
(OSD ONLY:LC74789M)
A/V(CCD)IC301
LA71590M
VIDEO INPUT
SELECTOR
EE/REC AUD
PB AUDIO
VIDEO
2fsc
EURO AV JACK
u-CO
SYSCON/
IC601
UPD7849
XT601:32.
XT602:8M
SCART CTL
AVLINK CTL
RESET
CBC DATA
VFD DATA
REMOCON DATA
A-OUT(L)
A-OUT(R)
V-OUT
A-IN(L)
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V-IN
OPTION
REAR
RCA
IN/OUT
OPTION
FRONT
A/V
INPUT
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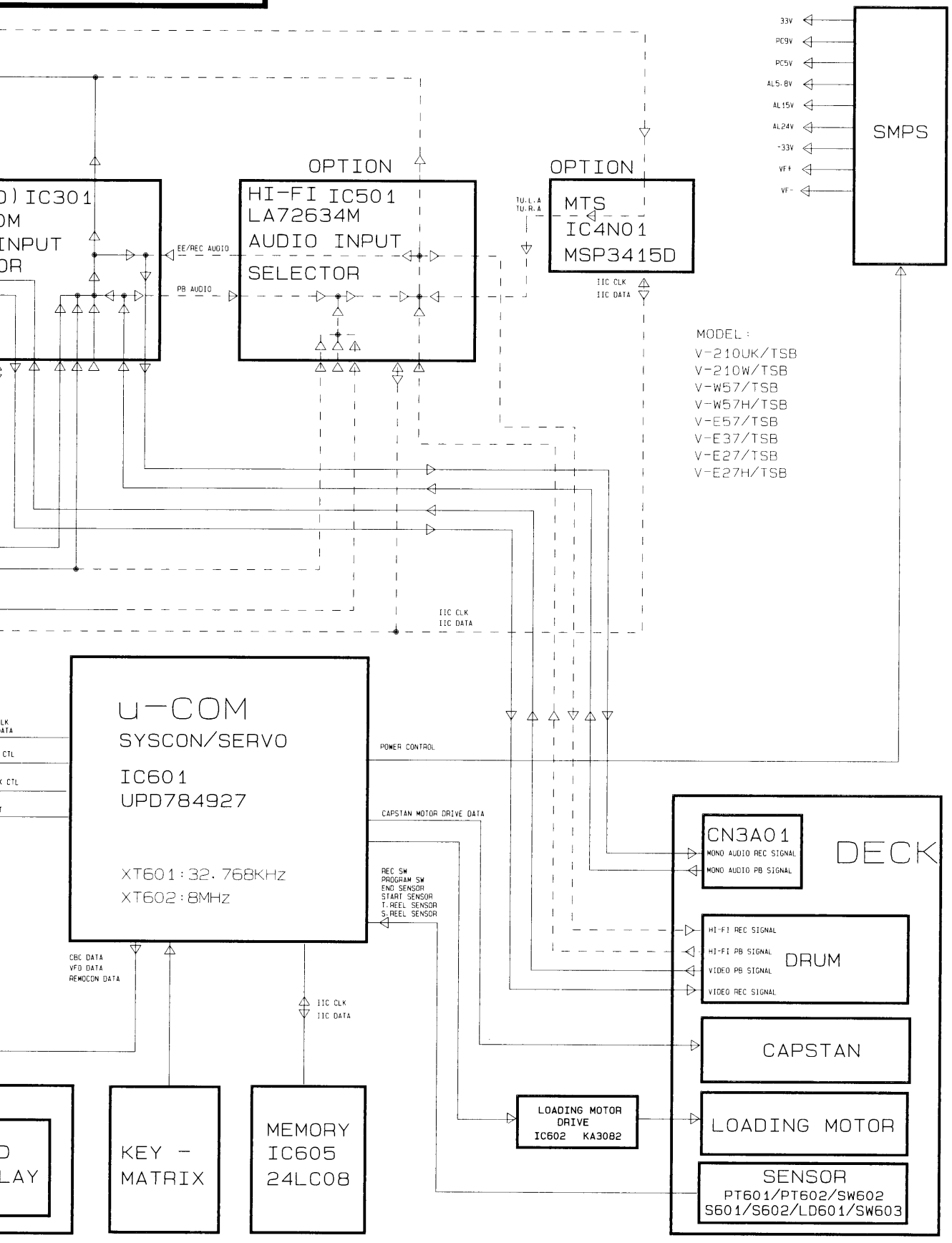
OPTION
CBC
VFD
DISPLAY
KEY -
MATRIX

THOUT CANAL MODELS



9. PCB Diagrams

9-1 Main ---------- 9-2

9-2 VFD (With AV-LinK) ---------- 9-3

9-3 VFD (Without AV-LinK) ---------- 9-3

9-4 A2/NICAM ---------- 9-3

9-5 Front Jack ---------- 9-3

9. PCB Diagrams

9-1 Main - - -

- - - 9-2

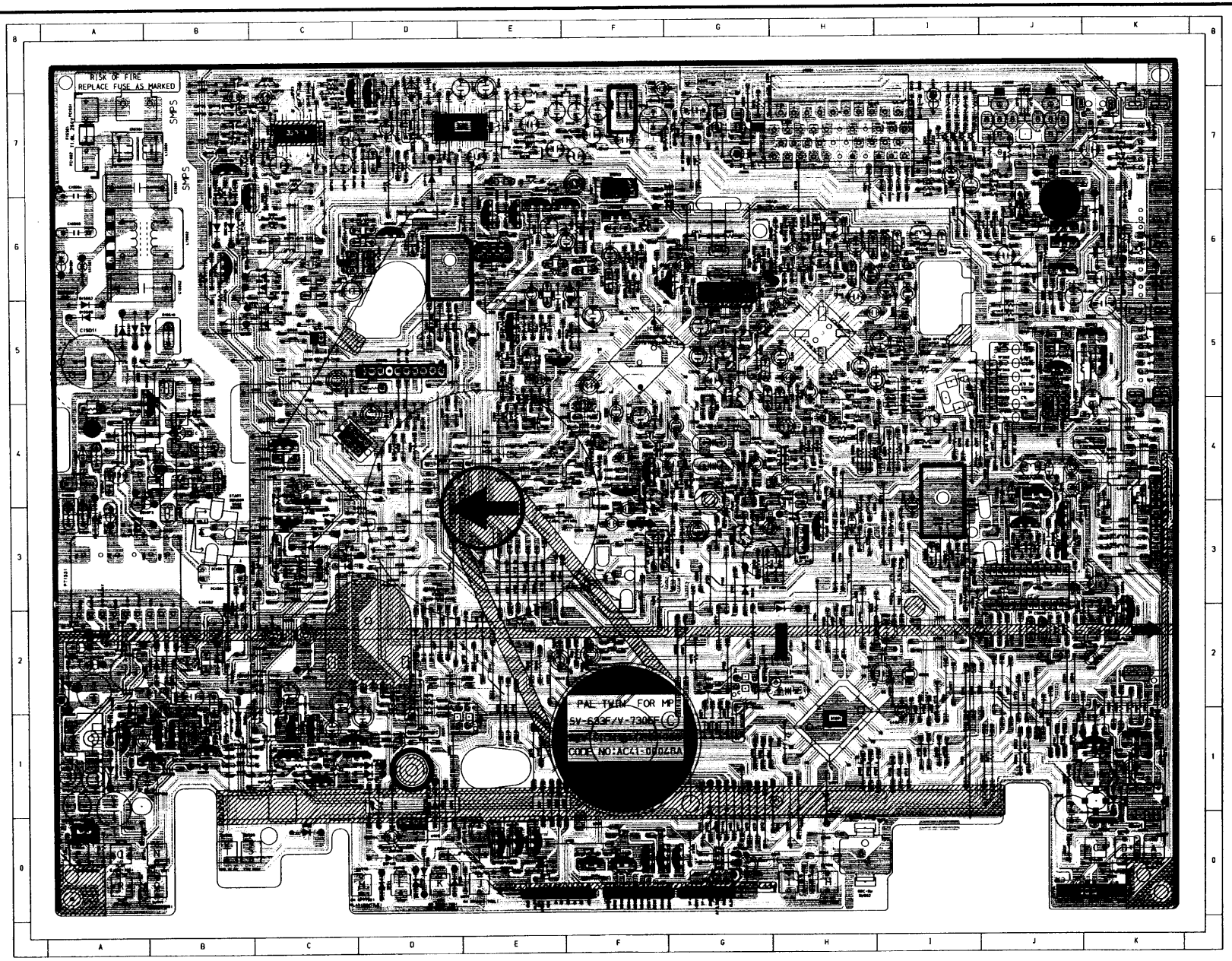
- - - 9-3

- - - 9-3

- - - 9-3

- - - 9-3

9-1 Main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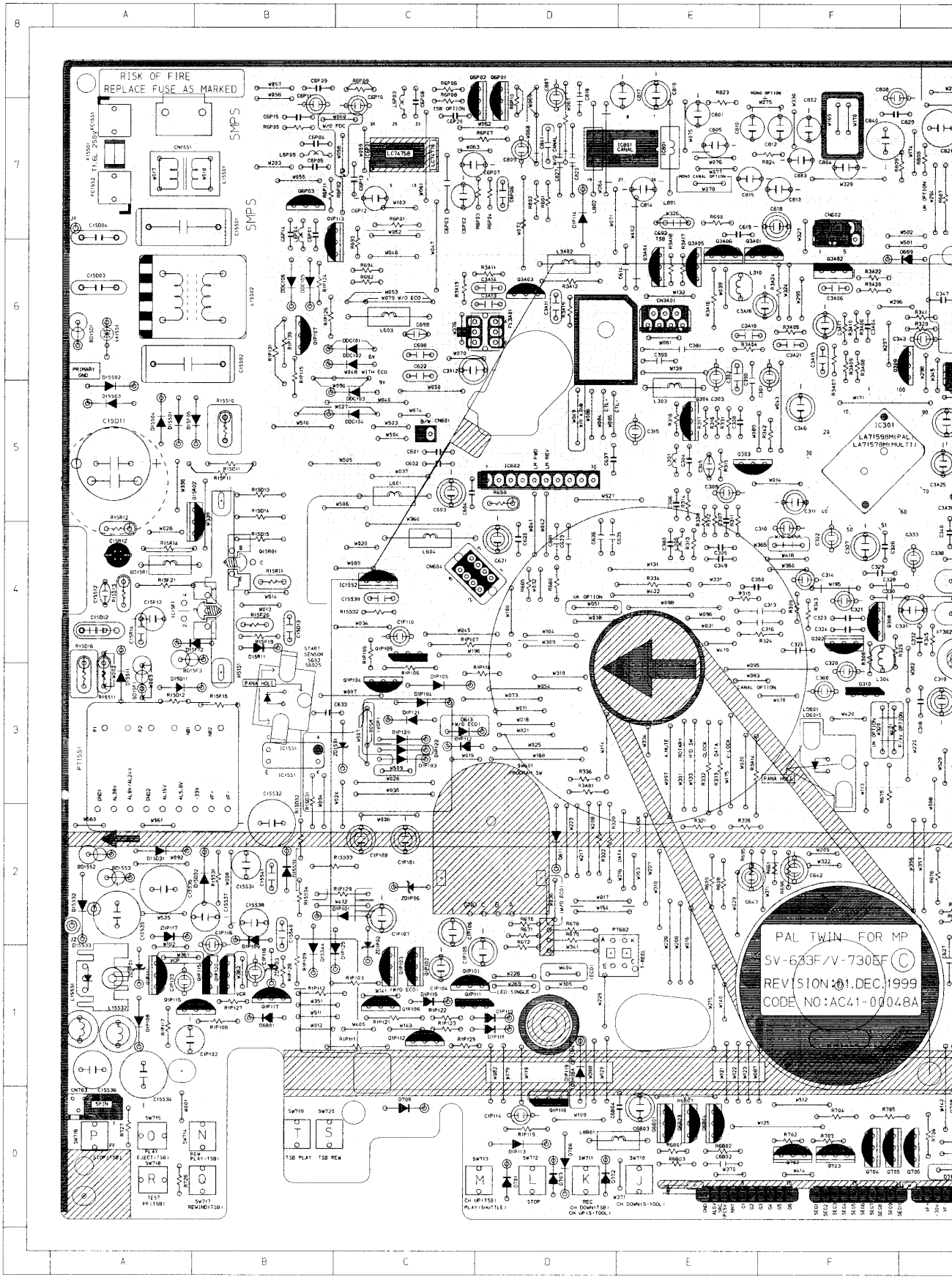
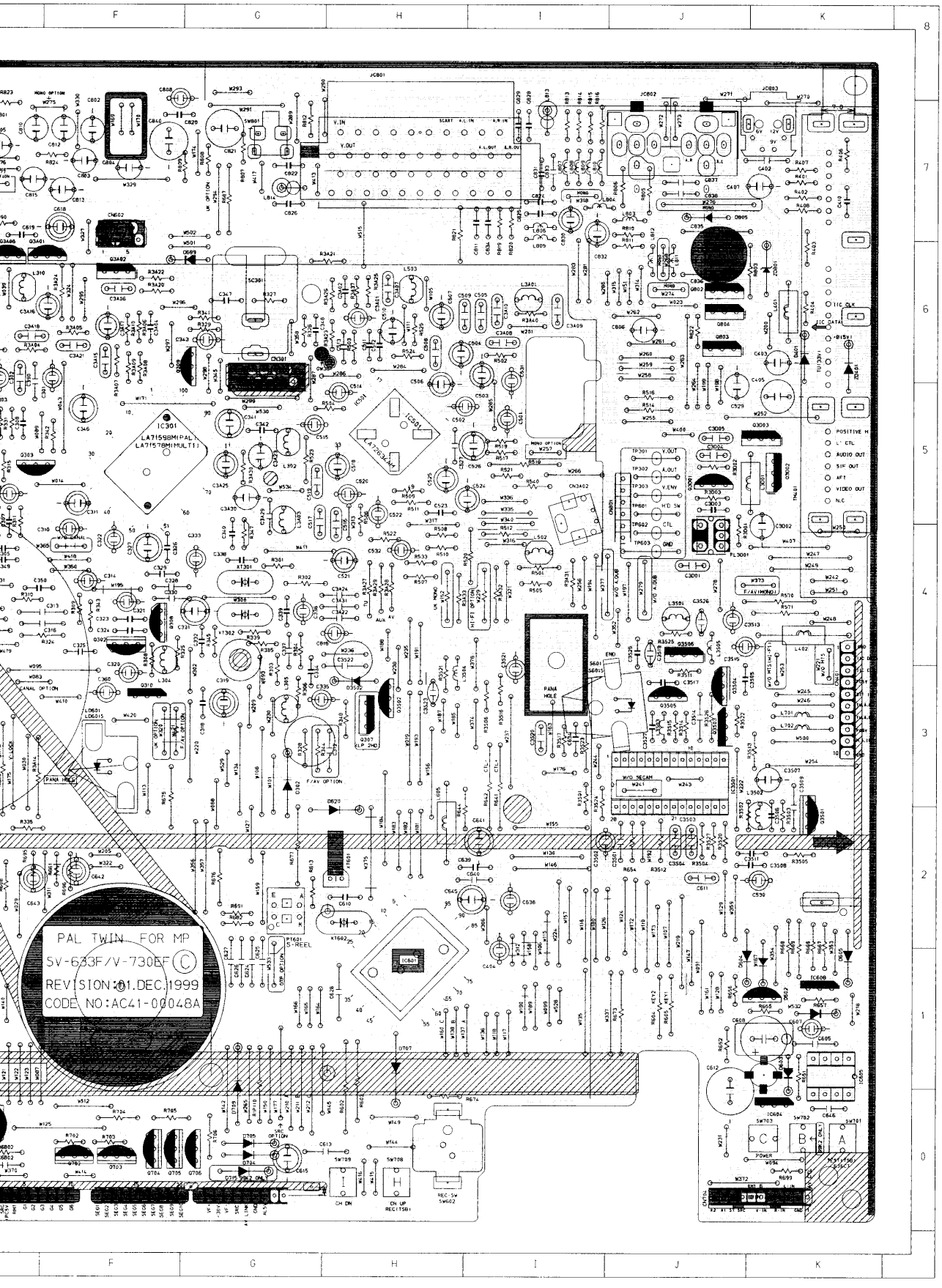
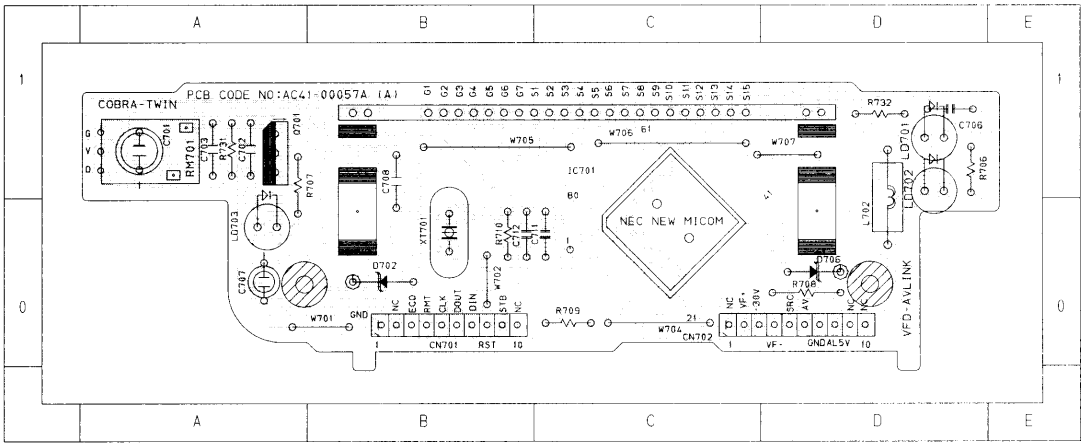
REPLACE FUSE AS MARKED
SMPS
SMPS
PAL TYPE FOR MP
5V-633F/V-730F
CODE NO:ACC1-D0D2BA

9-1 Main

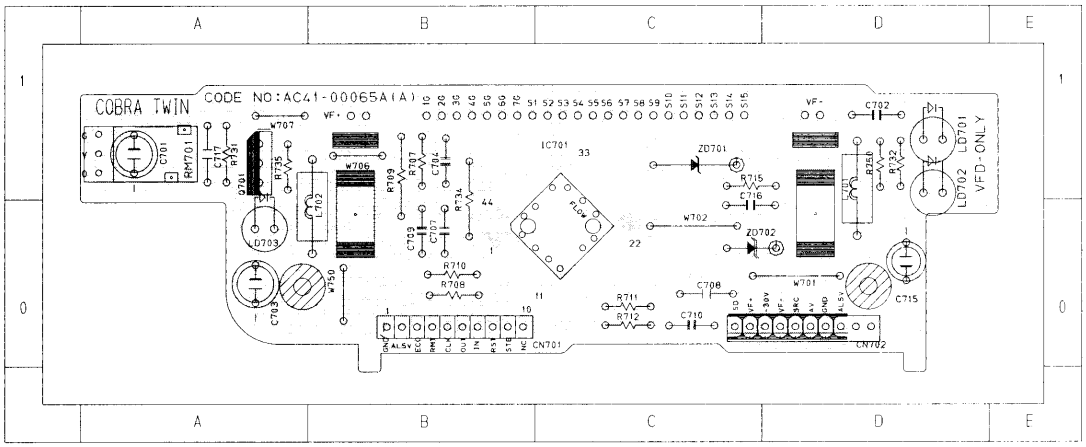

RISK OF FIRE
REPLACE FUSE AS MARKED
SMPS
PAL TWIN FOR MP
SV-633F/V-730EF
REVISION:01.DEC.1999
CODE NO:AC41-00048A


PAL TWIN FOR MP
SV-633F/V-730EF (C)
REVISION:01.DEC.1999
CODE NO:AC41-00048A

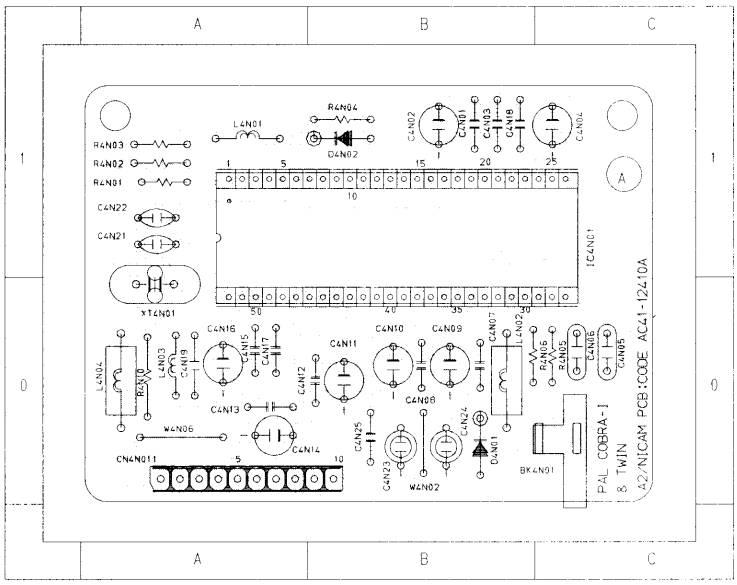
9-2 VFD (With AV-Link)



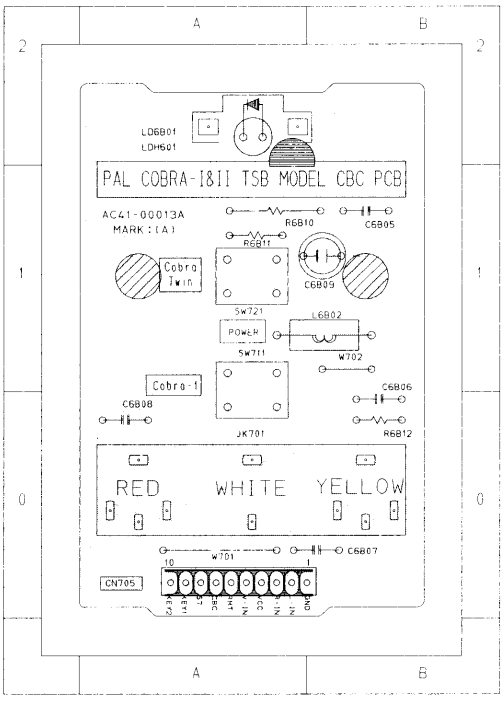
9-3 VFD (Without AV-Link)



9-4 A2/NICAM



9-5 Front Jack



10. Schematic Diagrams

◆ Block Identification of Main PCB ---------- 10-2

10-1 S.M.P.S. ---------- 10-3

10-2 Power (Ecology) ---------- 10-4

10-3 Power (Non-Ecology) ---------- 10-5

10-4 System Control/Servo ---------- 10-6

10-5 Audio/Video ---------- 10-7

10-6 Hi-Fi ---------- 10-8

10-7 TM-Block ---------- 10-9

10-8 SECAM ---------- 10-10

10-9 A2/NICAM ---------- 10-11

10-10 Input-Output (2 Scart) ---------- 10-12

10-11 Input-Output (1 Scart) ---------- 10-13

10-12 OSD/VPS/PDC ---------- 10-14

10-13 OSD (Without VPS/PDC) ---------- 10-15

10-14 VFD (With AV-Link) ---------- 10-16

10-15 VFD (Without AV-Link) ---------- 10-17

10-16 Remote-Control (Multi) ---------- 10-18

10-17 Remote-Control (VCR Only) ---------- 10-19

10. Schematic Diagrams

◆ Block Identification of Main PCB - 10-2

10-1 S.M.P.S. - 10-3

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10-4 System Control/Servo - 10-6

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10-10 Input-Output (2 Scart) - 10-12

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10-12 OSD/VPS/PDC - 10-14

10-13 OSD (Without VPS/PDC) - 10-15

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10-15 VFD (Without AV-Link) - 10-17

10-16 Remote-Control (Multi) - 10-18

10-17 Remote-Control (VCR Only) - 10-19

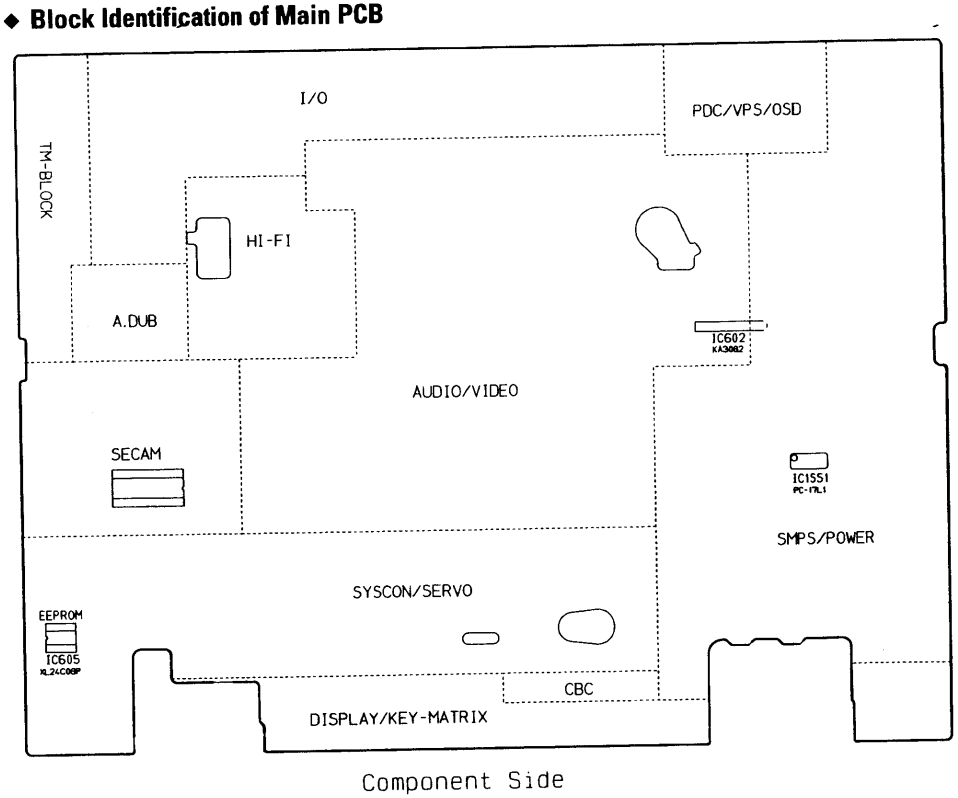
10-2
10-3
10-4
10-5
10-6
10-7
10-8
10-9
10-10
10-11
10-12
10-13
10-14
10-15
10-16
10-17
10-18
10-19

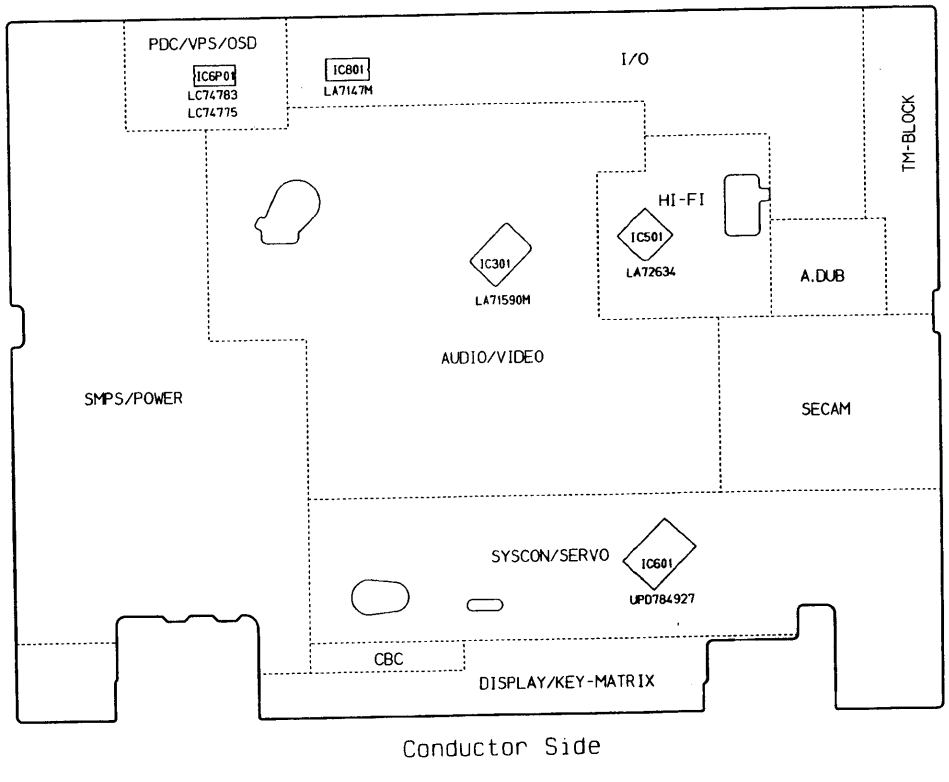
Note

For schematic Diagram
- Resistors are in ohms, 1/8W unless otherwise noted.

[redacted]

◆ Block Identification of Main PCB





Note

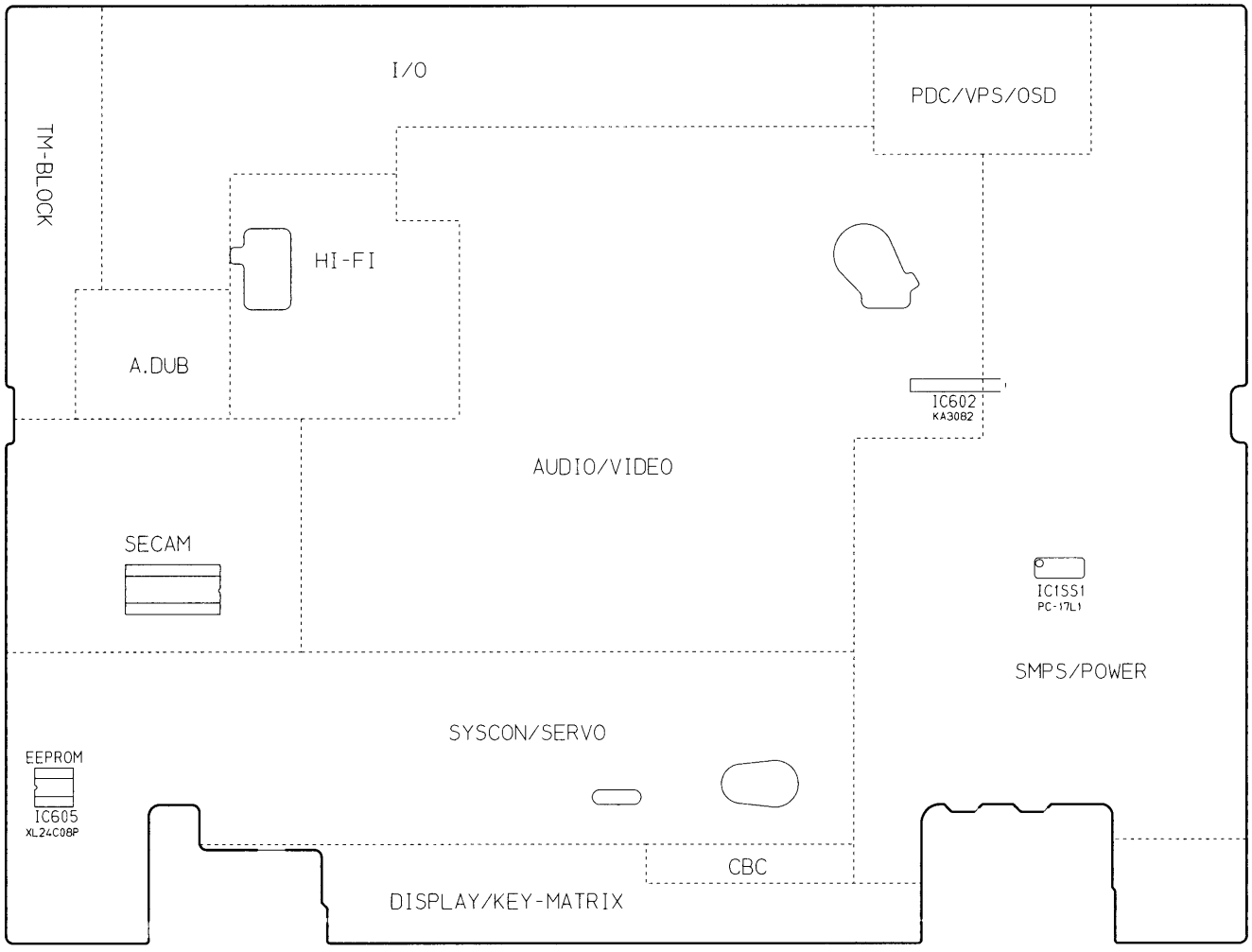
For schematic Diagram
- Resistors are in ohms, 1/8W unless otherwise noted.

Special note :
Most semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

Note :
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list (may be slightly different or amended since this drawing was prepared).

Important safety notices :
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components.
Use only the same type.

◆ Block Identification of Main PCB

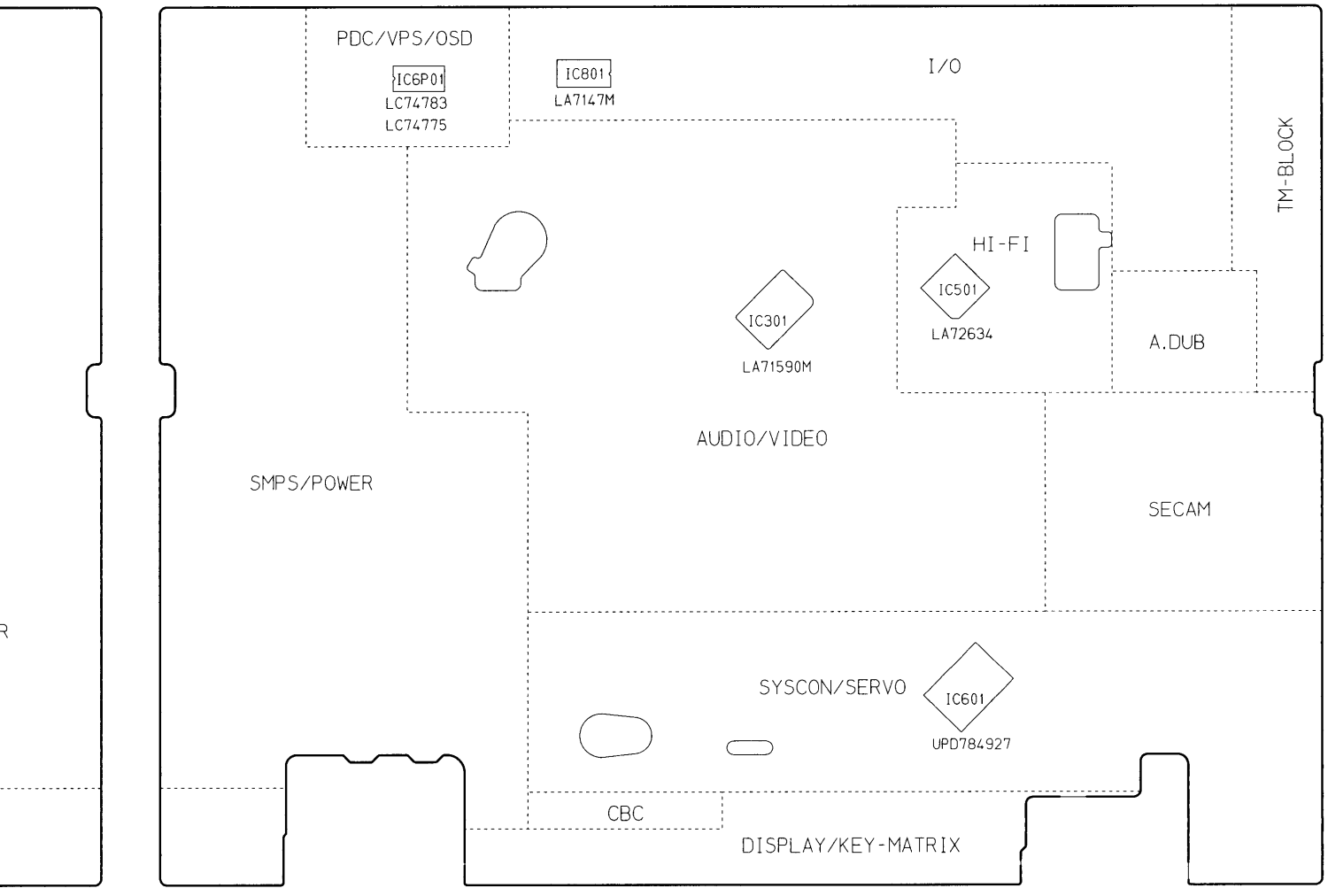


Component Side

d under the

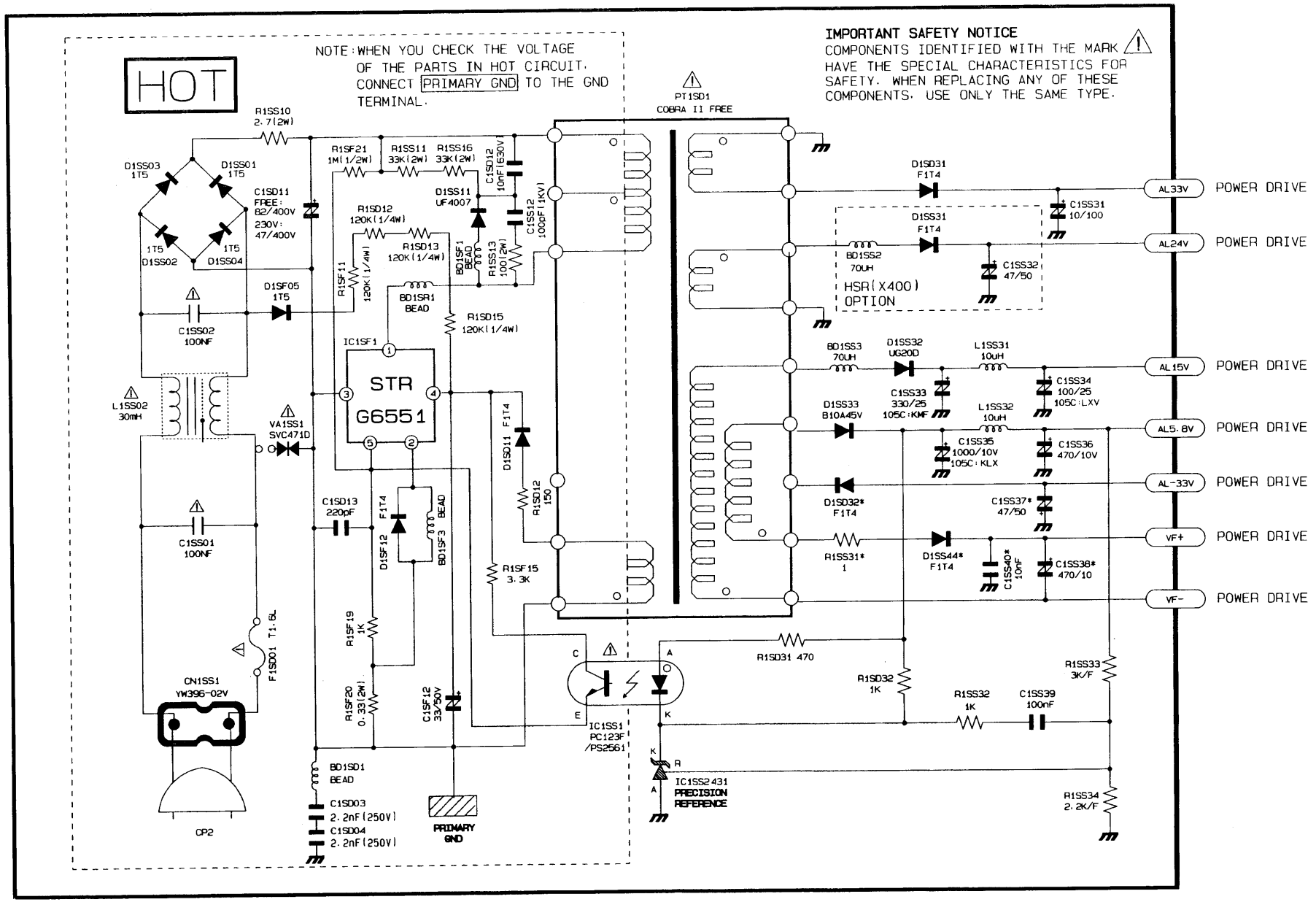
e slightly different

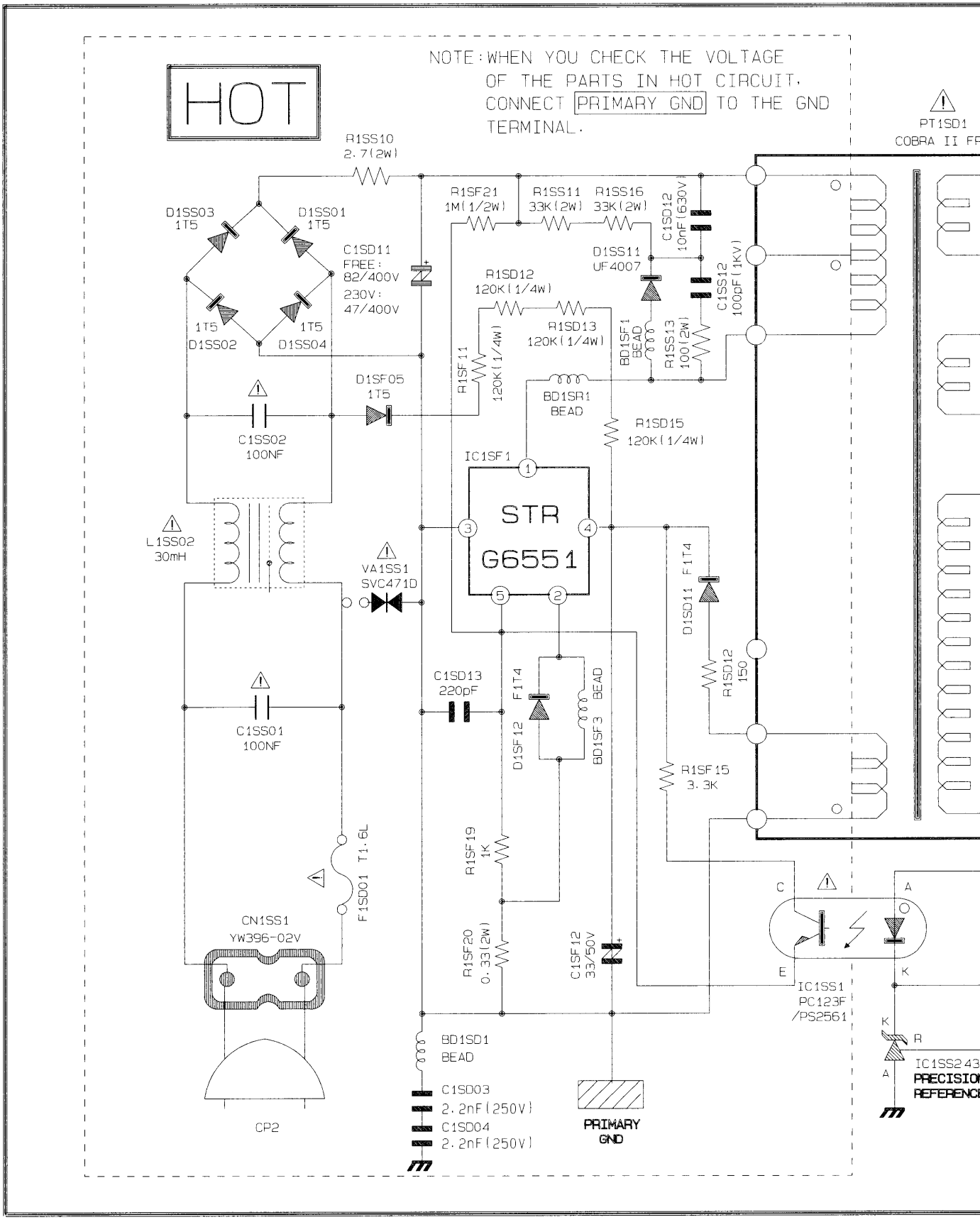
ents.

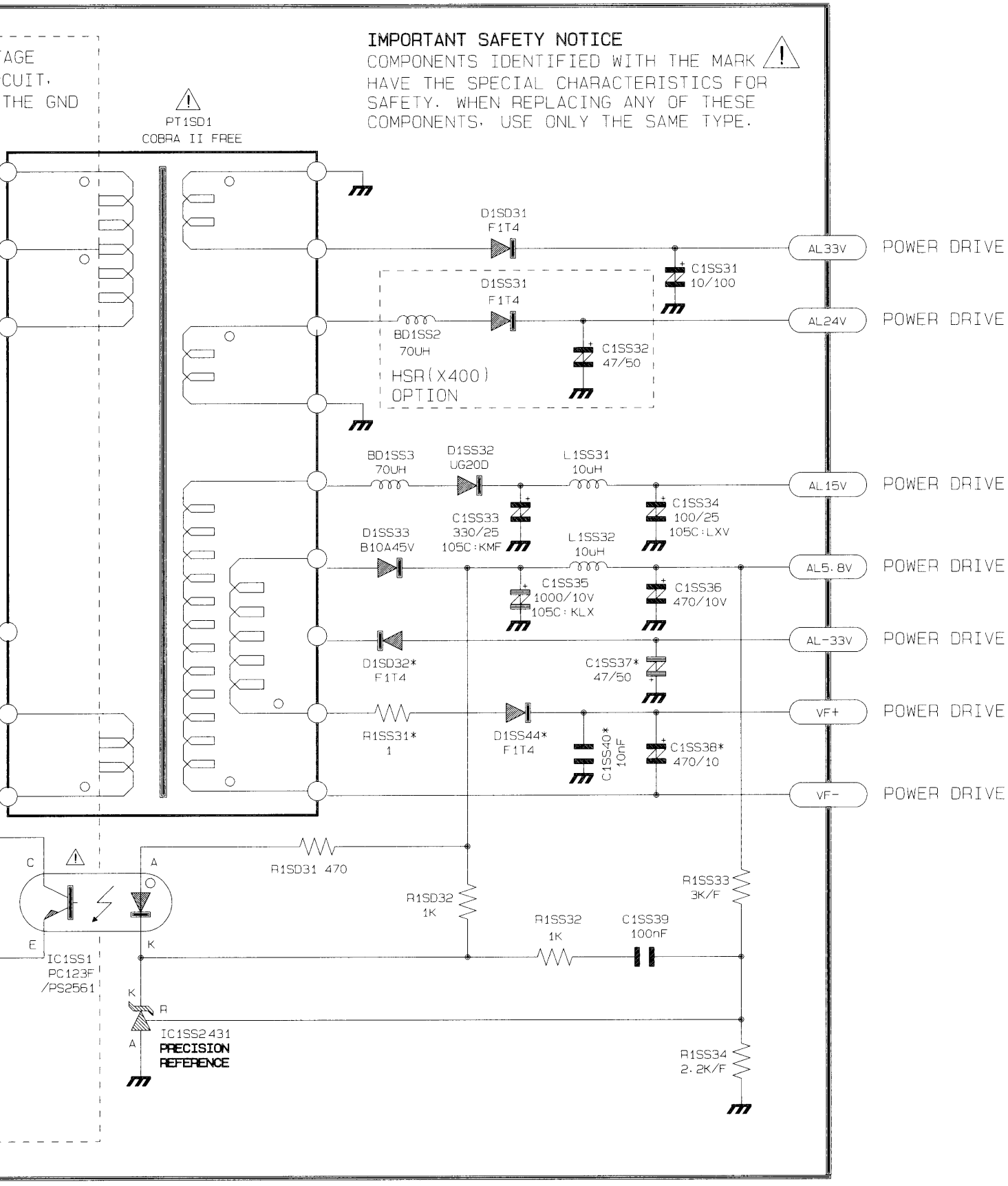


Conductor Side

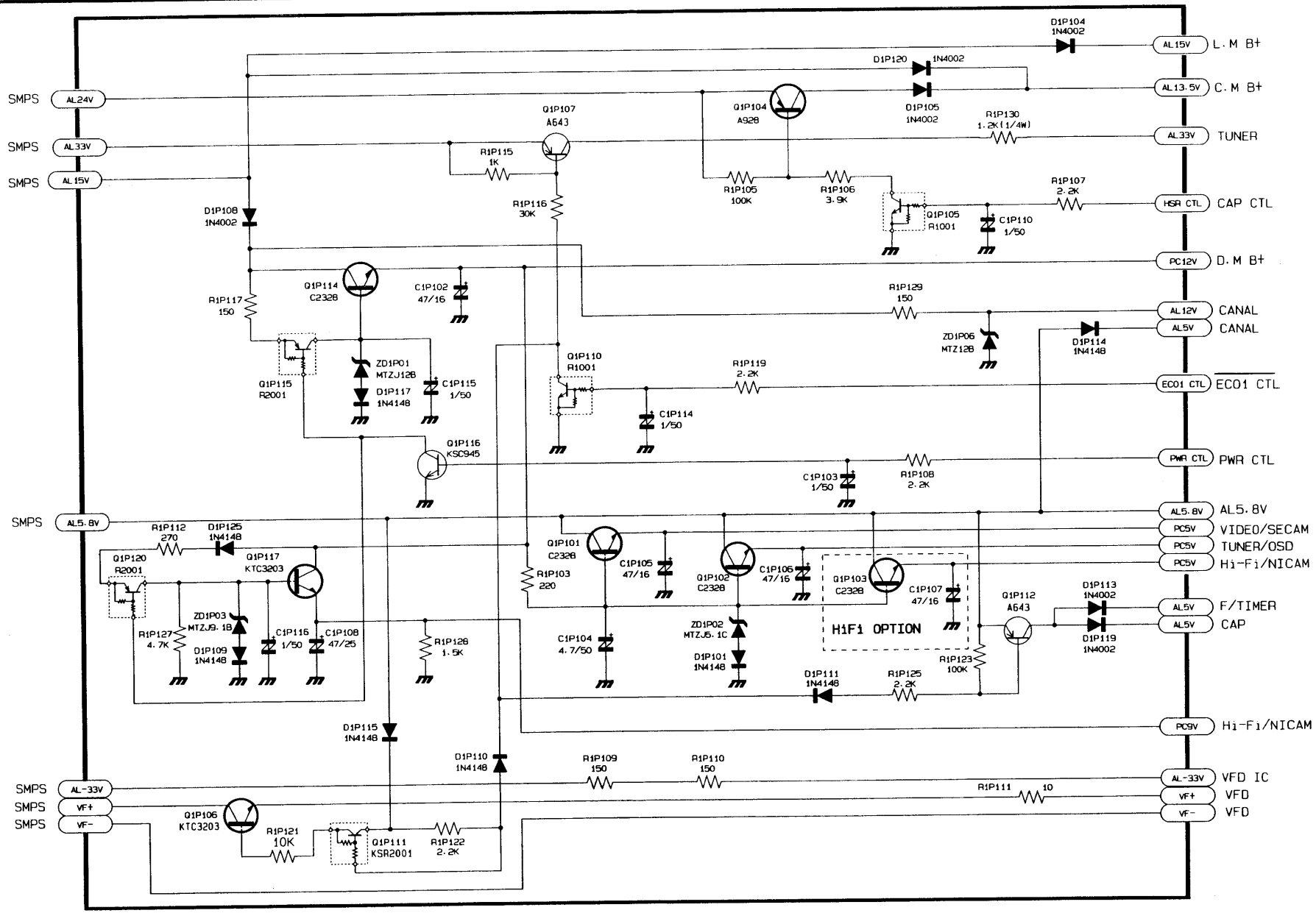
10-1 S.M.P.S.


HOT
NOTE: WHEN YOU CHECK THE VOLTAGE OF THE PARTS IN HOT CIRCUIT, CONNECT PRIMARY GND TO THE GND TERMINAL.
IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.
PT1SD1 COBRA II FREE
R1SS10 2.7(2W)
D1SS03 1T5
D1SS01 1T5
D1SS02 1T5
D1SS04 1T5
C1SD11 FREE: 82/400V 230V: 47/400V
R1SF21 1M(1/2W)
R1SS11 33K(2W)
R1SS16 33K(2W)
C1SD12 10nF(630V)
C1SS12 100pF(1KV)
D1SS11 UF4007
R1SD12 120K(1/4W)
R1SD13 120K(1/4W)
BD1SF1 BEAD
R1SS13 100(2W)
R1SF11 120K(1/4W)
D1SF05 1T5
BD1SR1 BEAD
R1SD15 120K(1/4W)
C1SS02 100NF
L1SS02 30mH
VA1SS1 SVC471D
IC1SF1
STR G6551
C1SS01 100NF
C1SD13 220pF
D1SF12 F1T4
BD1SF3 BEAD
D1SD11 F1T4
R1SD12 150
R1SF15 3.3K
R1SF19 1K
R1SF20 0.33(2W)
C1SF12 33/50V
F1SD01 T1.6L
CN1SS1 YW396-02V
CP2
BD1SD1 BEAD
C1SD03 2.2nF(250V)
C1SD04 2.2nF(250V)
PRIMARY GND
IC1SS1 PC123F /PS2561
R1SD31 470
R1SD32 1K
R1SS32 1K
C1SS39 100nF
R1SS33 3K/F
R1SS34 2.2K/F
IC1SS2 431 PRECISION REFERENCE
D1SD31 F1T4
D1SS31 F1T4
BD1SS2 70UH
C1SS32 47/50
HSR(X400) OPTION
C1SS31 10/100
AL33V
POWER DRIVE
AL24V
POWER DRIVE
BD1SS3 70UH
D1SS32 UG20D
L1SS31 10uH
C1SS33 330/25 105C:KMF
C1SS34 100/25 105C:LXV
AL15V
POWER DRIVE
D1SS33 B10A45V
L1SS32 10uH
C1SS35 1000/10V 105C:KLX
C1SS36 470/10V
AL5.8V
POWER DRIVE
D1SD32* F1T4
C1SS37* 47/50
AL-33V
POWER DRIVE
R1SS31* 1
D1SS44* F1T4
C1SS40* 10nF
C1SS38* 470/10
VF+
POWER DRIVE
VF-
POWER DRIVE

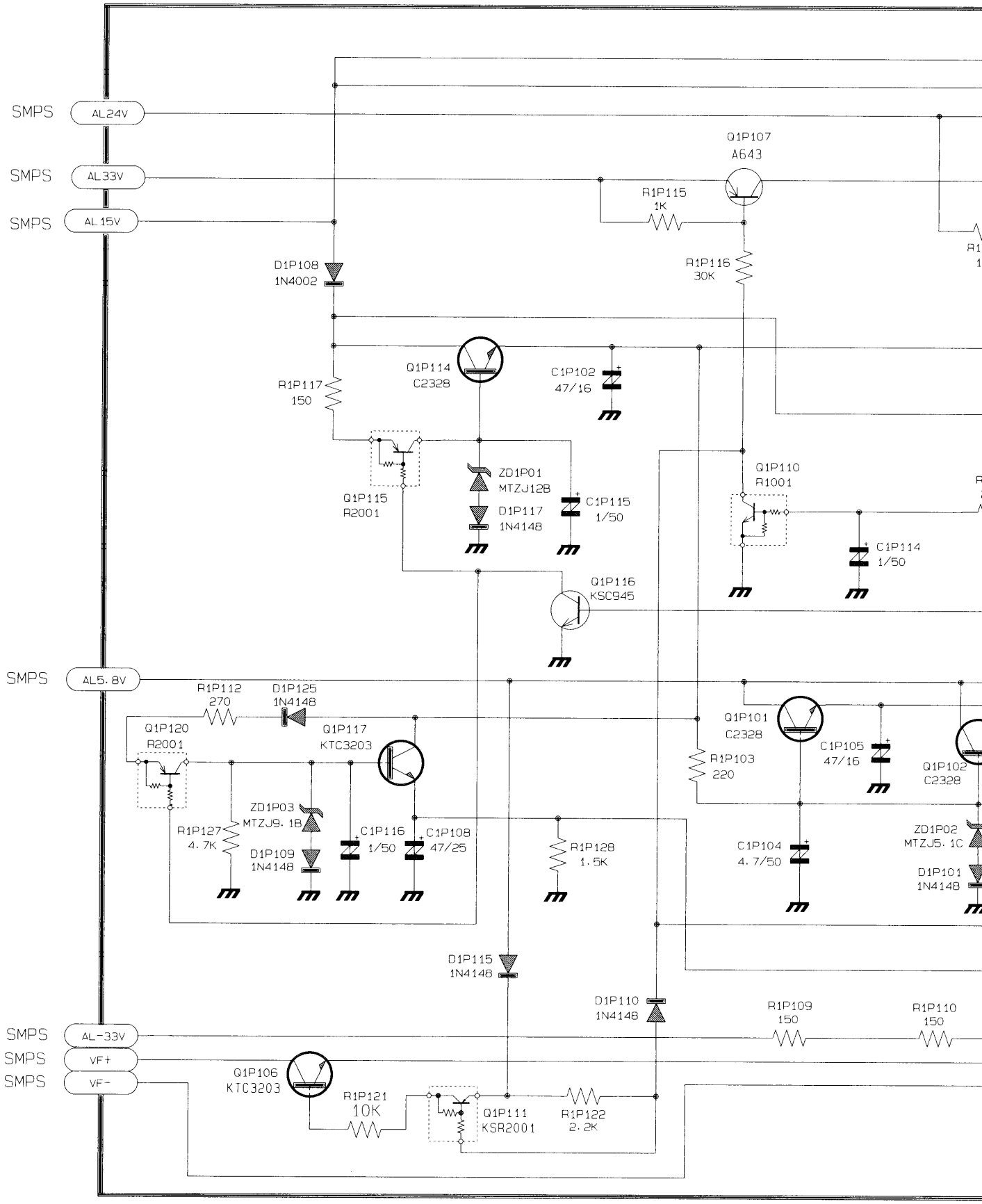

HOT
NOTE: WHEN YOU CHECK THE VOLTAGE OF THE PARTS IN HOT CIRCUIT, CONNECT PRIMARY GND TO THE GND TERMINAL.
R1SS10 2.7(2W)
D1SS03 1T5
D1SS01 1T5
1T5 D1SS02
1T5 D1SS04
C1SD11 FREE: 82/400V 230V: 47/400V
R1SF21 1M(1/2W)
R1SS11 33K(2W)
R1SS16 33K(2W)
C1SD12 10nF(630V)
D1SS11 UF4007
R1SD12 120K(1/4W)
R1SD13 120K(1/4W)
BD1SF1 BEAD
R1SS13 100(2W)
C1SS12 100pF(1KV)
R1SF11 120K(1/4W)
D1SF05 1T5
C1SS02 100NF
BD1SR1 BEAD
R1SD15 120K(1/4W)
IC1SF1
STR G6551
L1SS02 30mH
VA1SS1 SVC471D
D1SD11 F1T4
R1SD12 150
C1SD13 220pF
D1SF12 F1T4
BD1SF3 BEAD
R1SF15 3.3K
C1SS01 100NF
F1SD01 T1.6L
R1SF19 1K
CN1SS1 YW396-02V
R1SF20 0.33(2W)
C1SF12 33/50V
IC1SS1 PC123F /PS2561
BD1SD1 BEAD
C1SD03 2.2nF(250V)
C1SD04 2.2nF(250V)
PRIMARY GND
CP2
PT1SD1
COBRA II FR
IC1SS243
PRECISION
REFERENC

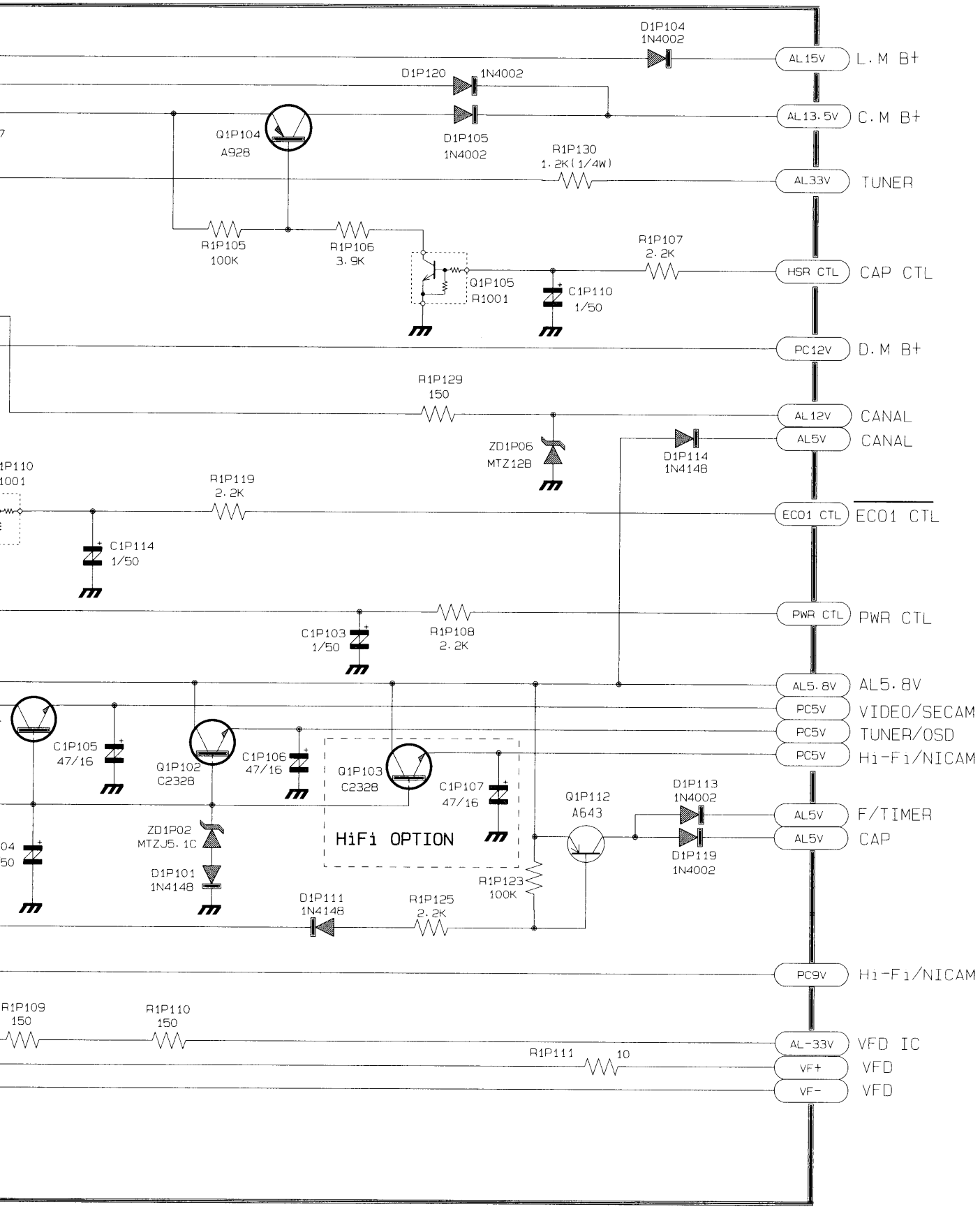

IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.
PT1SD1
COBRA II FREE
D1SD31
F1T4
C1SS31
10/100
AL33V
POWER DRIVE
D1SS31
F1T4
BD1SS2
70UH
C1SS32
47/50
HSR(X400)
OPTION
AL24V
POWER DRIVE
BD1SS3
70UH
D1SS32
UG20D
L1SS31
10uH
AL15V
POWER DRIVE
C1SS33
330/25
105C:KMF
C1SS34
100/25
105C:LXV
D1SS33
B10A45V
L1SS32
10uH
AL5.8V
POWER DRIVE
C1SS35
1000/10V
105C:KLX
C1SS36
470/10V
AL-33V
POWER DRIVE
D1SD32*
F1T4
C1SS37*
47/50
VF+
POWER DRIVE
R1SS31*
1
D1SS44*
F1T4
C1SS40*
10nF
C1SS38*
470/10
VF-
POWER DRIVE
R1SD31 470
R1SD32
1K
R1SS32
1K
C1SS39
100nF
R1SS33
3K/F
R1SS34
2.2K/F
IC1SS1
PC123F
/PS2561
IC1SS2431
PRECISION
REFERENCE

10-2 Power (Ecology)

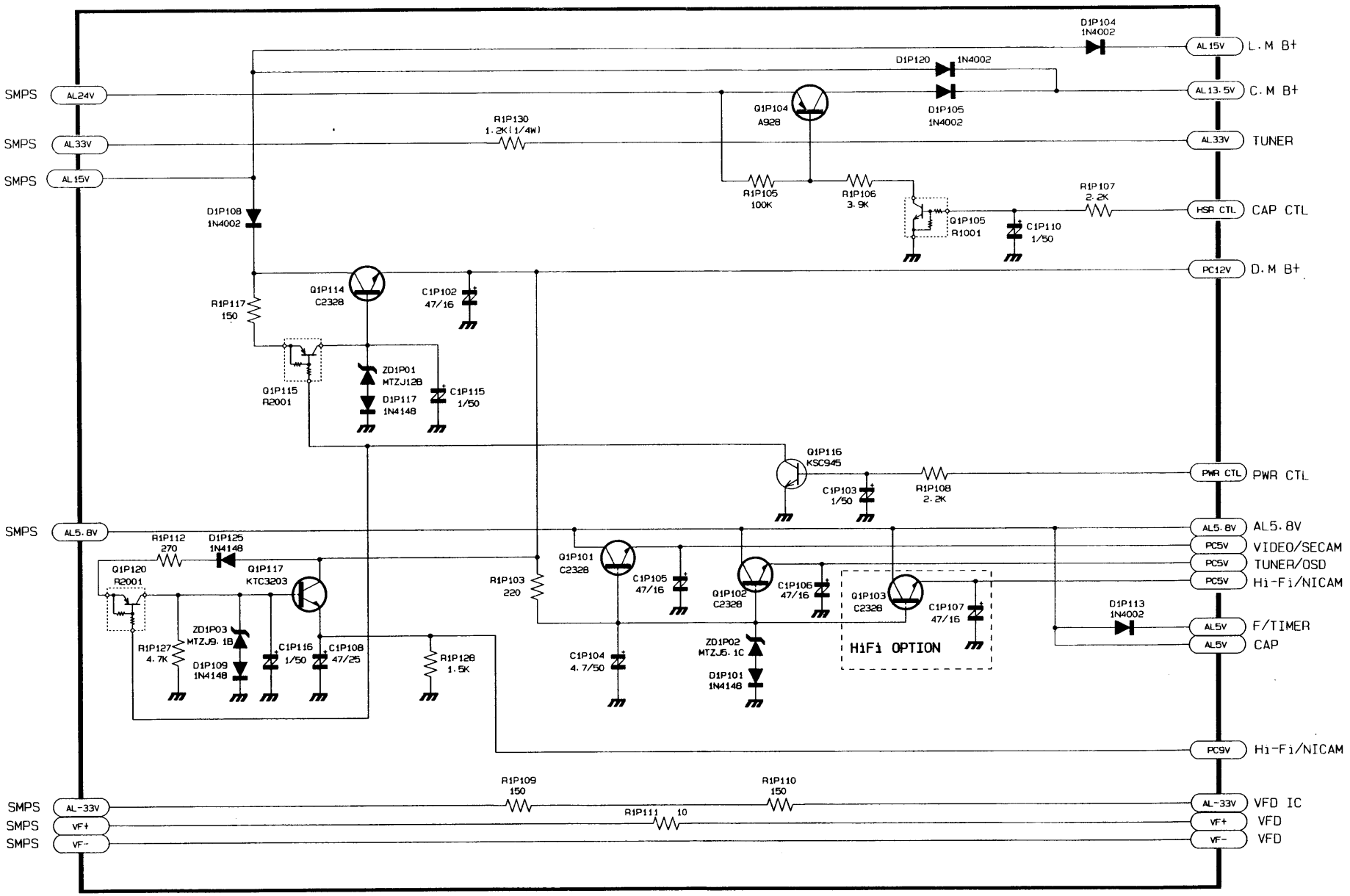


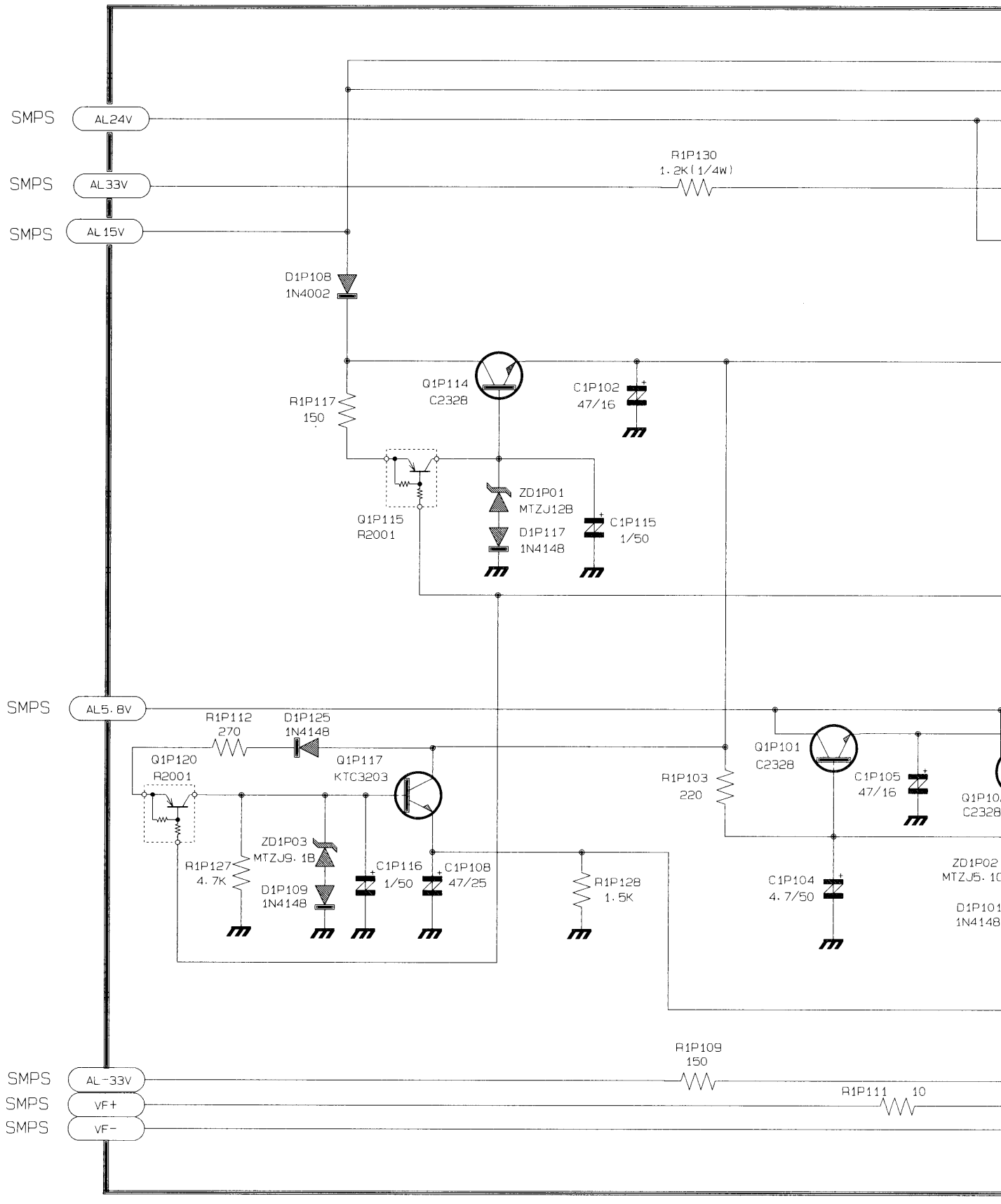
10-2 Power (Ecology)

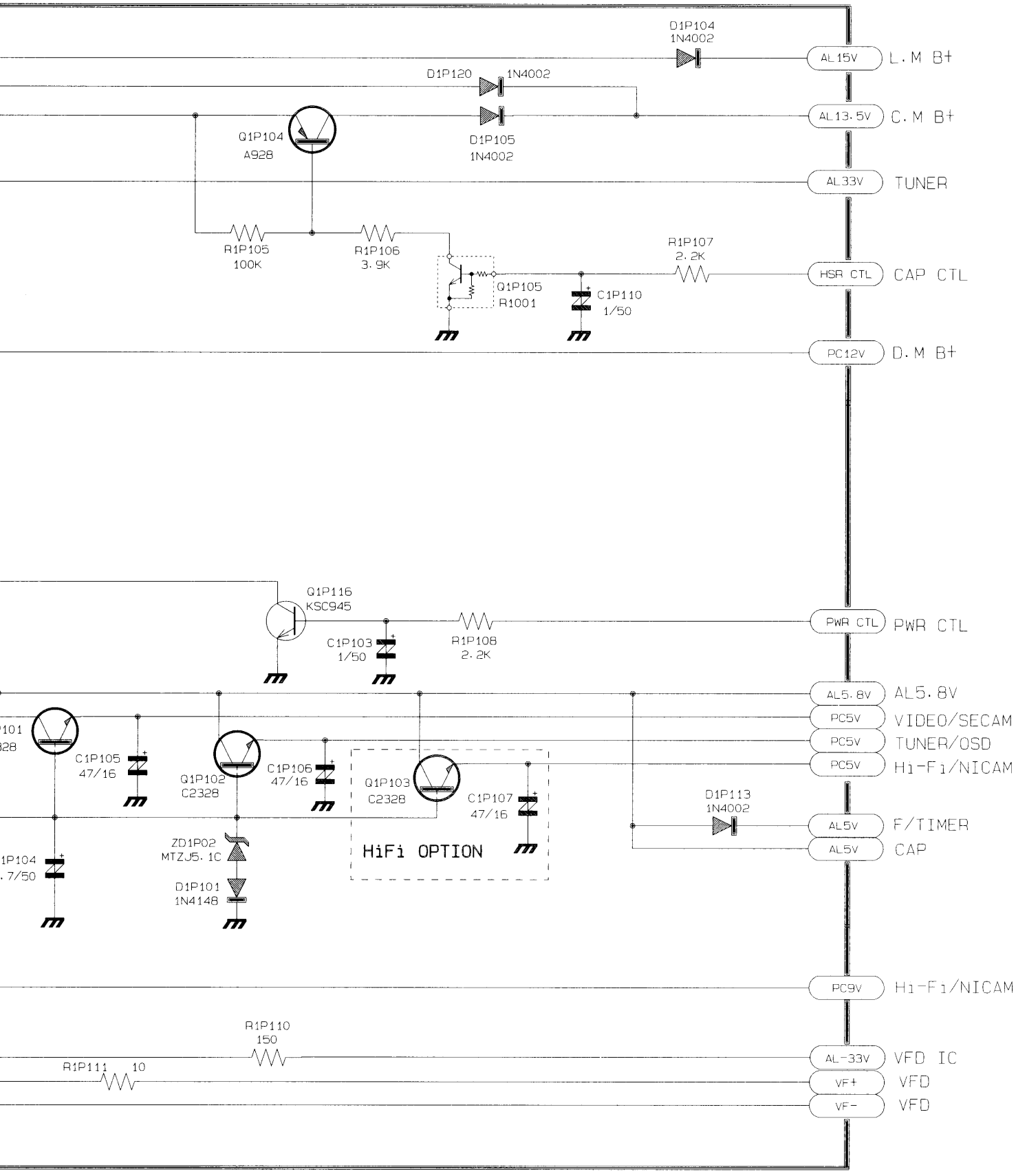



D1P104
1N4002
AL15V
L.M B+
D1P120
1N4002
D1P105
1N4002
AL13.5V
C.M B+
Q1P104
A928
R1P130
1.2K(1/4W)
AL33V
TUNER
R1P105
100K
R1P106
3.9K
R1P107
2.2K
HSR CTL
CAP CTL
Q1P105
R1001
C1P110
1/50
PC12V
D.M B+
R1P129
150
AL12V
CANAL
AL5V
CANAL
ZD1P06
MTZ12B
D1P114
1N4148
R1P119
2.2K
ECO1 CTL
ECO1 CTL
C1P114
1/50
PWR CTL
PWR CTL
C1P103
1/50
R1P108
2.2K
AL5.8V
AL5.8V
PC5V
VIDEO/SECAM
PC5V
TUNER/OSD
PC5V
Hi-Fi/NICAM
C1P105
47/16
Q1P102
C2328
C1P106
47/16
Q1P103
C2328
C1P107
47/16
HiFi OPTION
Q1P112
A643
D1P113
1N4002
D1P119
1N4002
AL5V
F/TIMER
AL5V
CAP
ZD1P02
MTZJ5.1C
D1P101
1N4148
R1P123
100K
D1P111
1N4148
R1P125
2.2K
PC9V
Hi-Fi/NICAM
R1P109
150
R1P110
150
AL-33V
VFD IC
R1P111
10
VF+
VFD
VF-
VFD

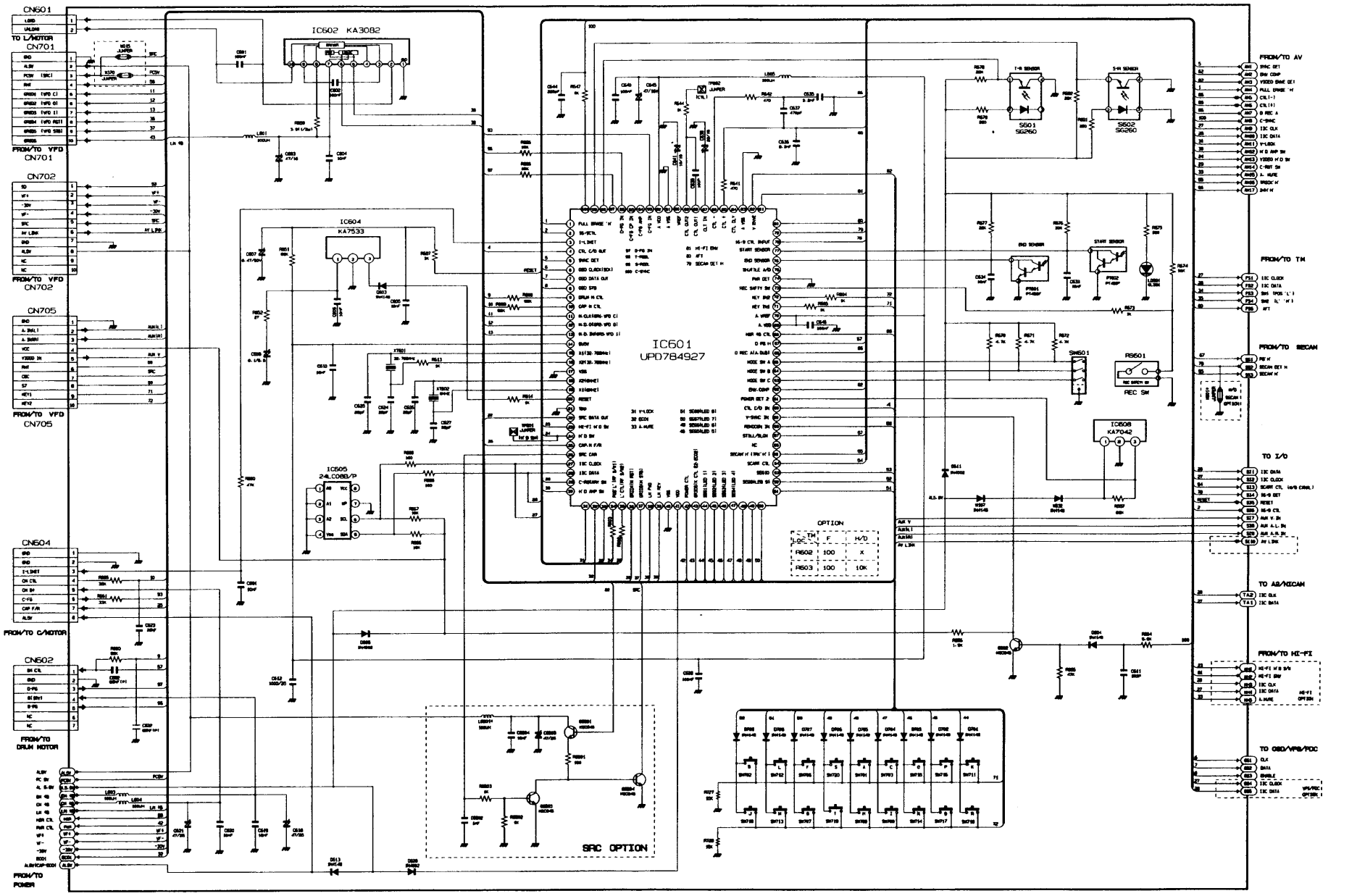
10-3 Power (Non-Ecology)



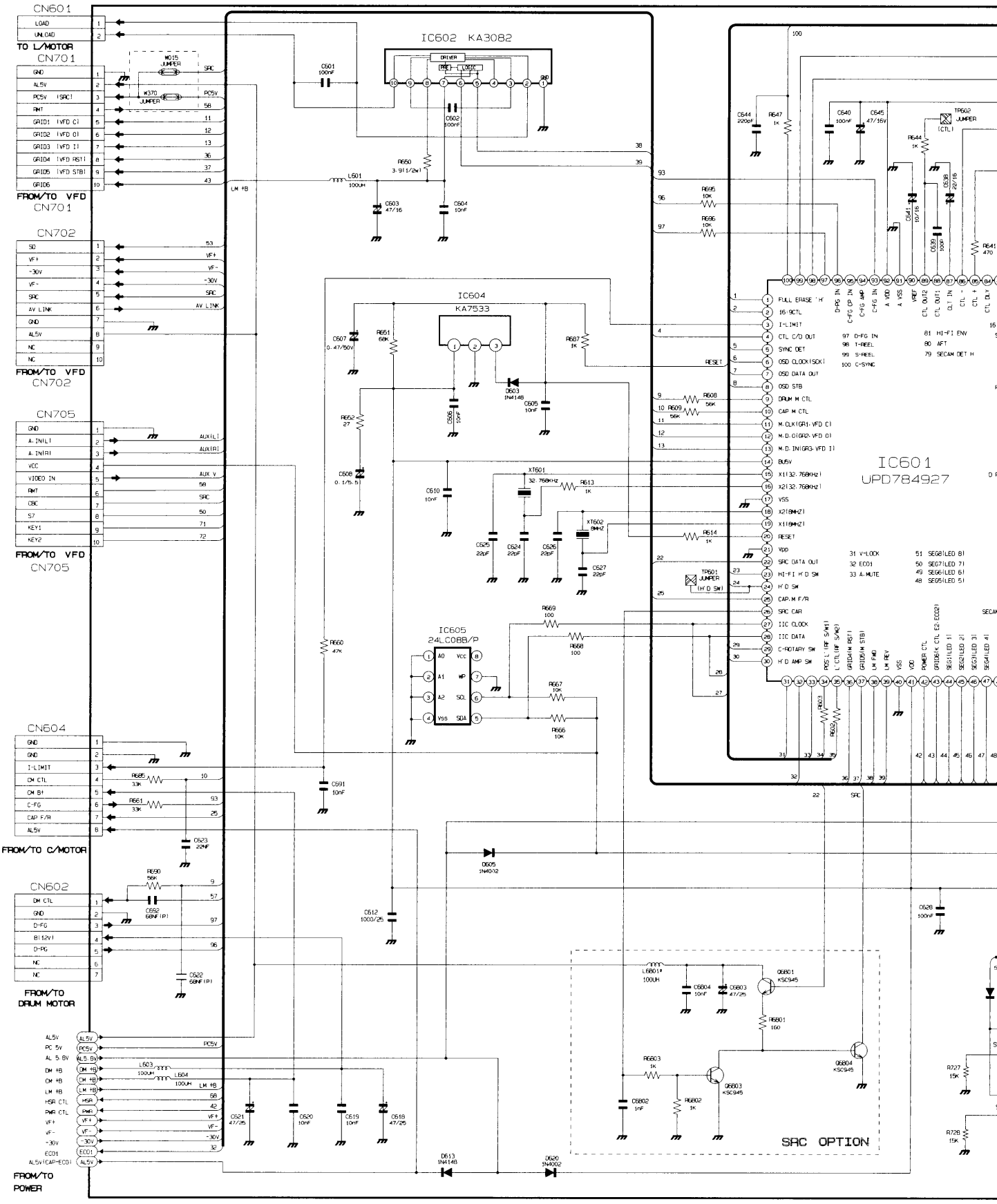

SMPS
AL24V
SMPS
AL33V
SMPS
AL15V
R1P130
1.2K(1/4W)
D1P108
1N4002
Q1P114
C2328
C1P102
47/16
R1P117
150
Q1P115
R2001
ZD1P01
MTZJ12B
D1P117
1N4148
C1P115
1/50
SMPS
AL5.8V
R1P112
270
D1P125
1N4148
Q1P120
R2001
Q1P117
KTC3203
Q1P101
C2328
R1P103
220
C1P105
47/16
ZD1P03
MTZJ5.1B
R1P127
4.7K
D1P109
1N4148
C1P116
1/50
C1P108
47/25
R1P128
1.5K
C1P104
4.7/50
ZD1P02
D1P101
1N4148
R1P109
150
R1P111
10
SMPS
AL-33V
SMPS
VF+
SMPS
VF-

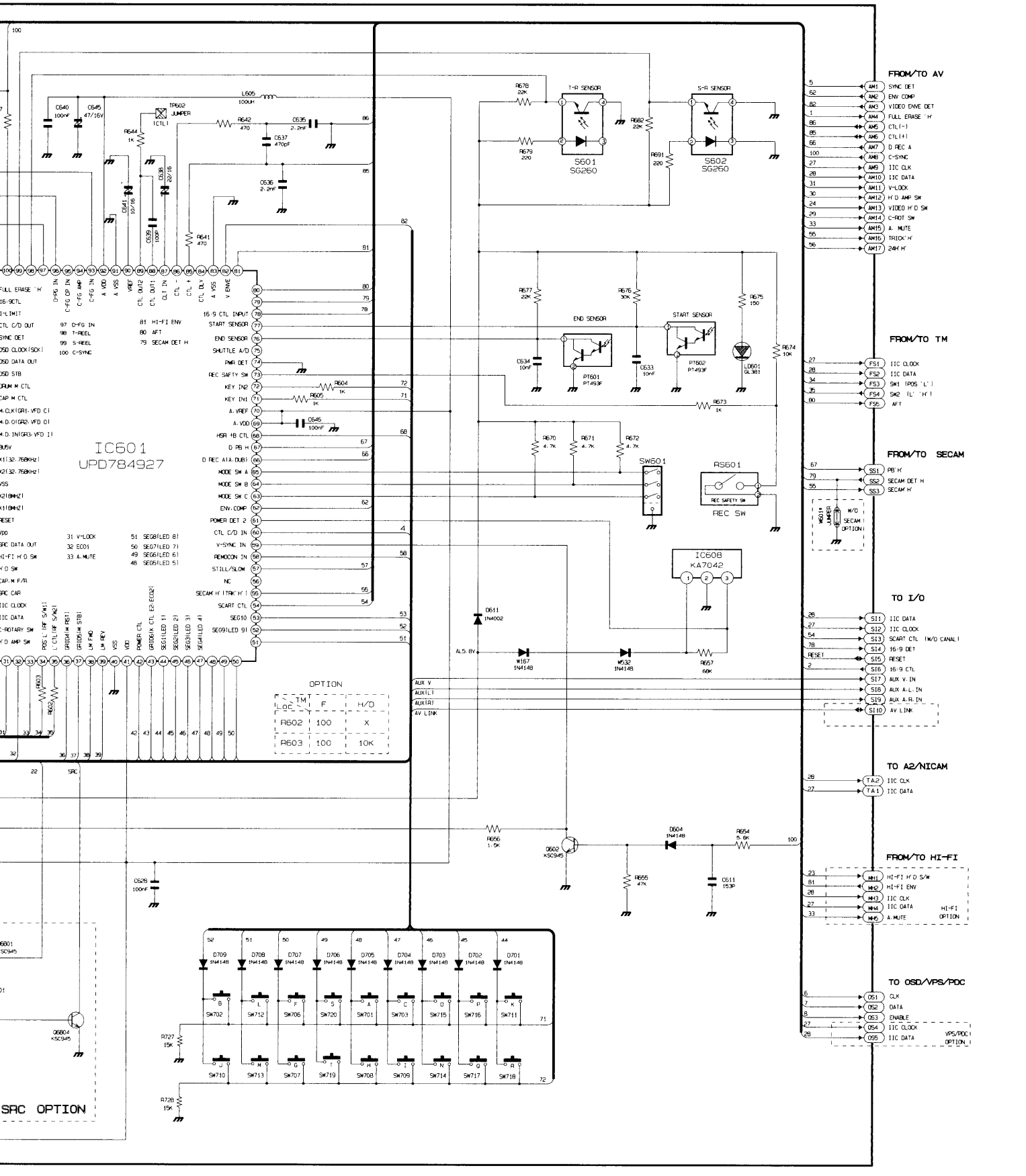

D1P104
1N4002
AL15V
L.M B+
D1P120
1N4002
D1P105
1N4002
AL13.5V
C.M B+
Q1P104
A928
AL33V
TUNER
R1P105
100K
R1P106
3.9K
R1P107
2.2K
HSR CTL
CAP CTL
Q1P105
R1001
C1P110
1/50
PC12V
D.M B+
Q1P116
KSC945
C1P103
1/50
R1P108
2.2K
PWR CTL
PWR CTL
AL5.8V
AL5.8V
PC5V
VIDEO/SECAM
PC5V
TUNER/OSD
PC5V
Hi-Fi/NICAM
C1P105
47/16
Q1P102
C2328
C1P106
47/16
Q1P103
C2328
C1P107
47/16
D1P113
1N4002
AL5V
F/TIMER
AL5V
CAP
ZD1P02
MTZJ5.1C
D1P101
1N4148
HiFi OPTION
PC9V
Hi-Fi/NICAM
R1P110
150
R1P111
10
AL-33V
VFD IC
VF+
VFD
VF-
VFD

10-4 System Control/Servo

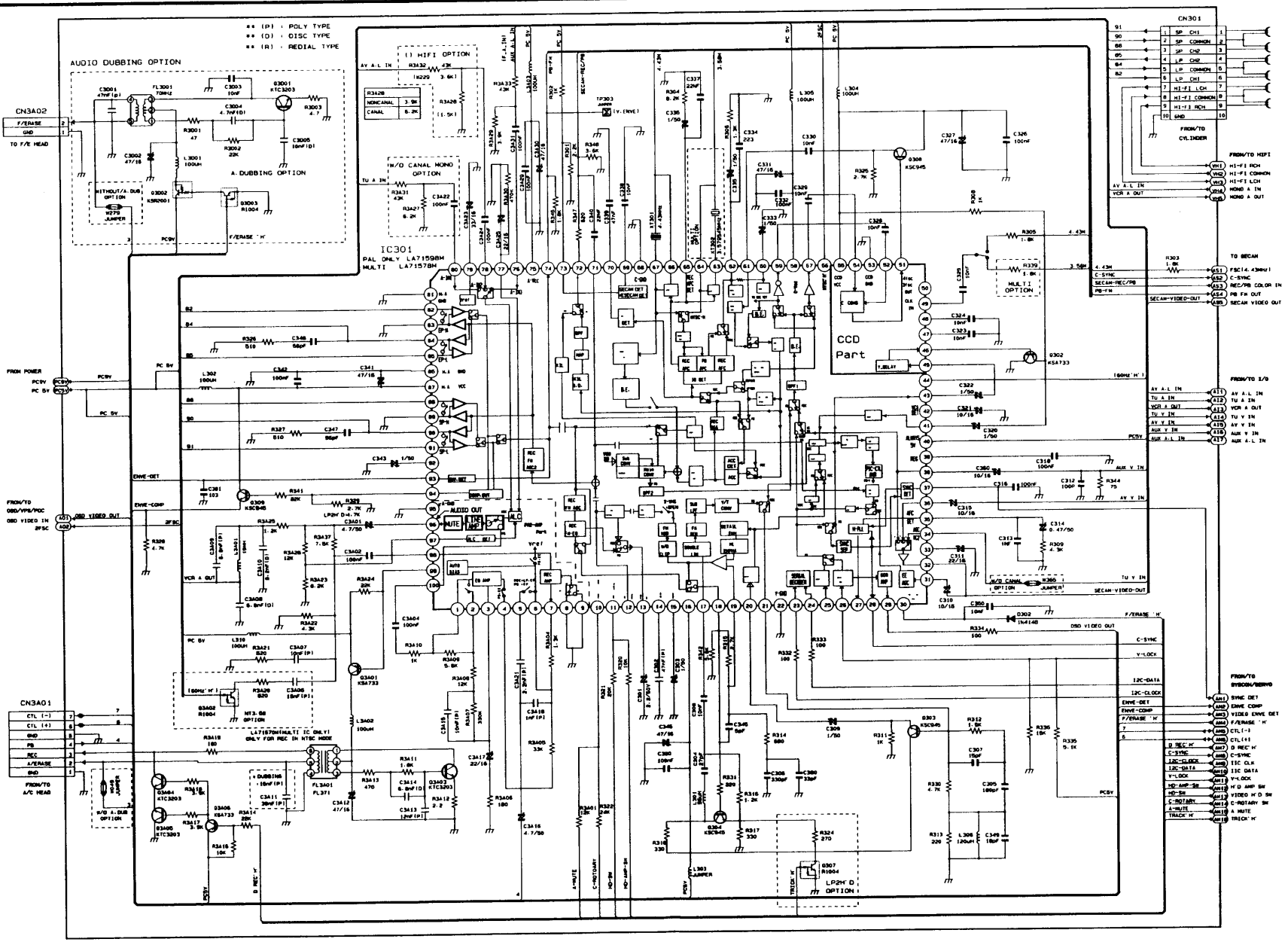


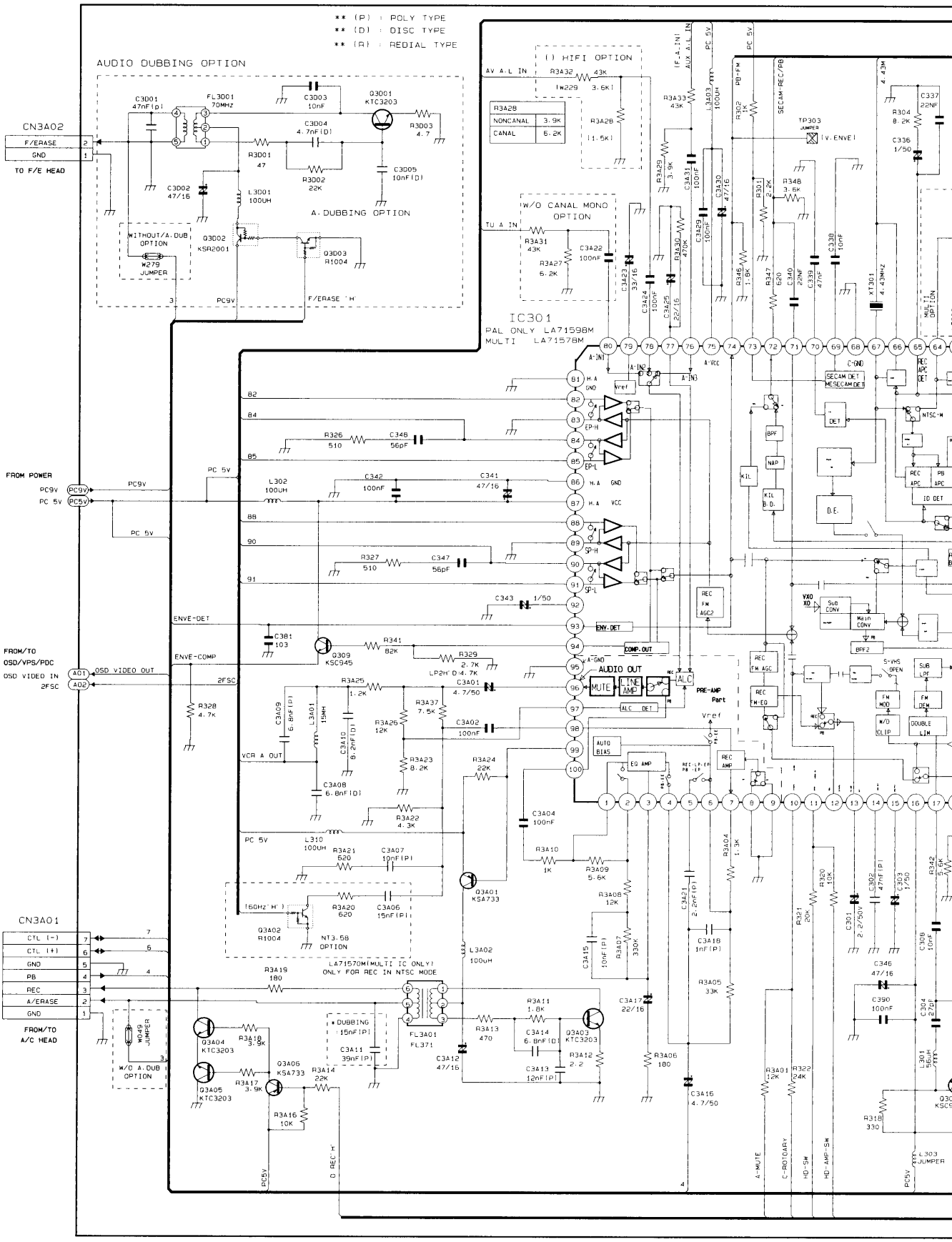
10-4 System Control/Servo

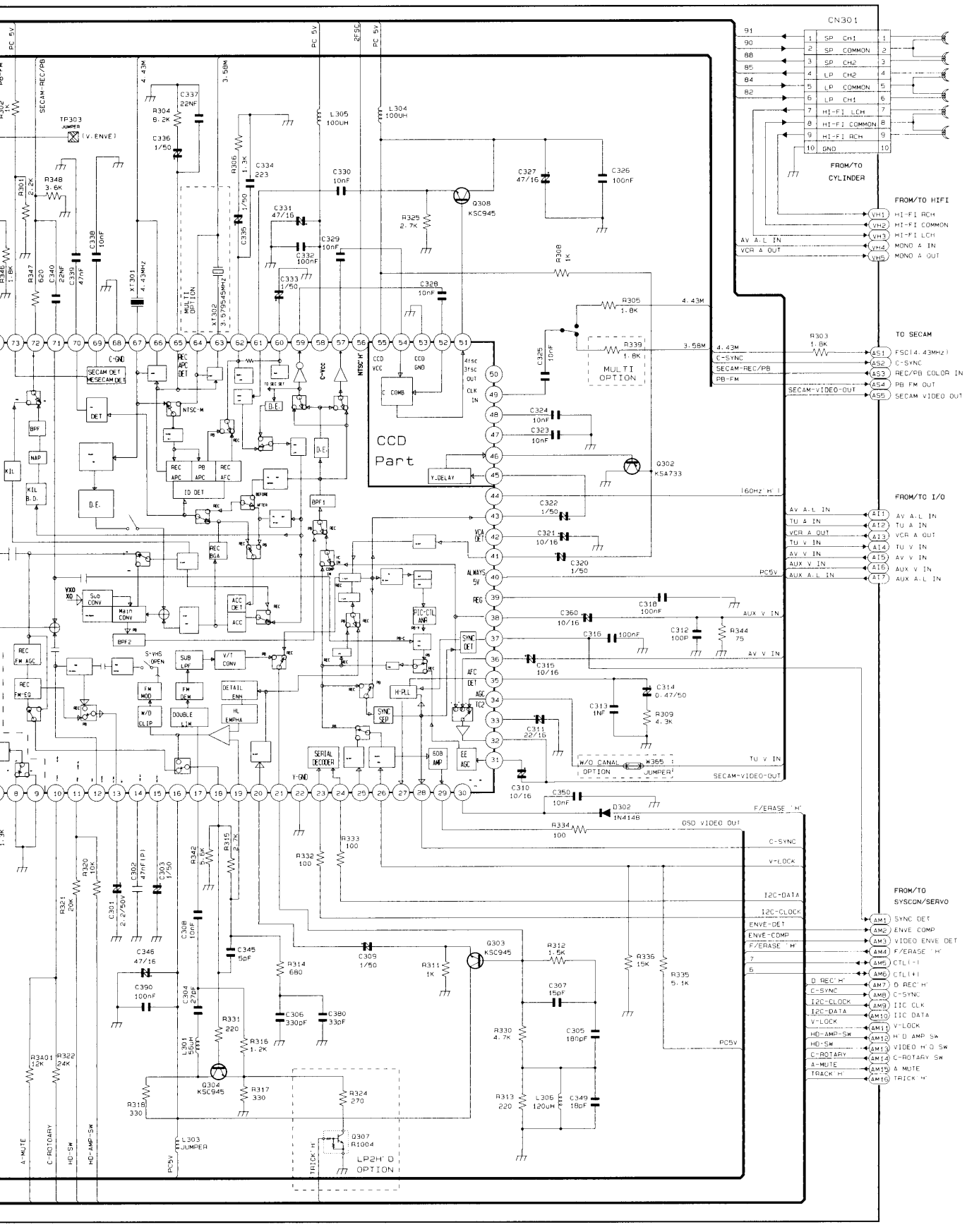



FROM/TO AV
FROM/TO TM
FROM/TO SECAM
TO I/O
TO A2/NICAM
FROM/TO HI-FI
TO OSD/VPS/PDC
IC601
UPD784927
IC608
KA7042
T-R SENSOR
S-R SENSOR
S601
SG260
S602
SG250
END SENSOR
START SENSOR
PT601
PT493F
PT602
PT493F
LD601
GL381
SW601
RS601
REC SAFETY SW
REC SW
OPTION
SRC OPTION
W/O JUMPER
W/O SECAM I OPTION
HI-FI OPTION
VPS/PDC OPTION

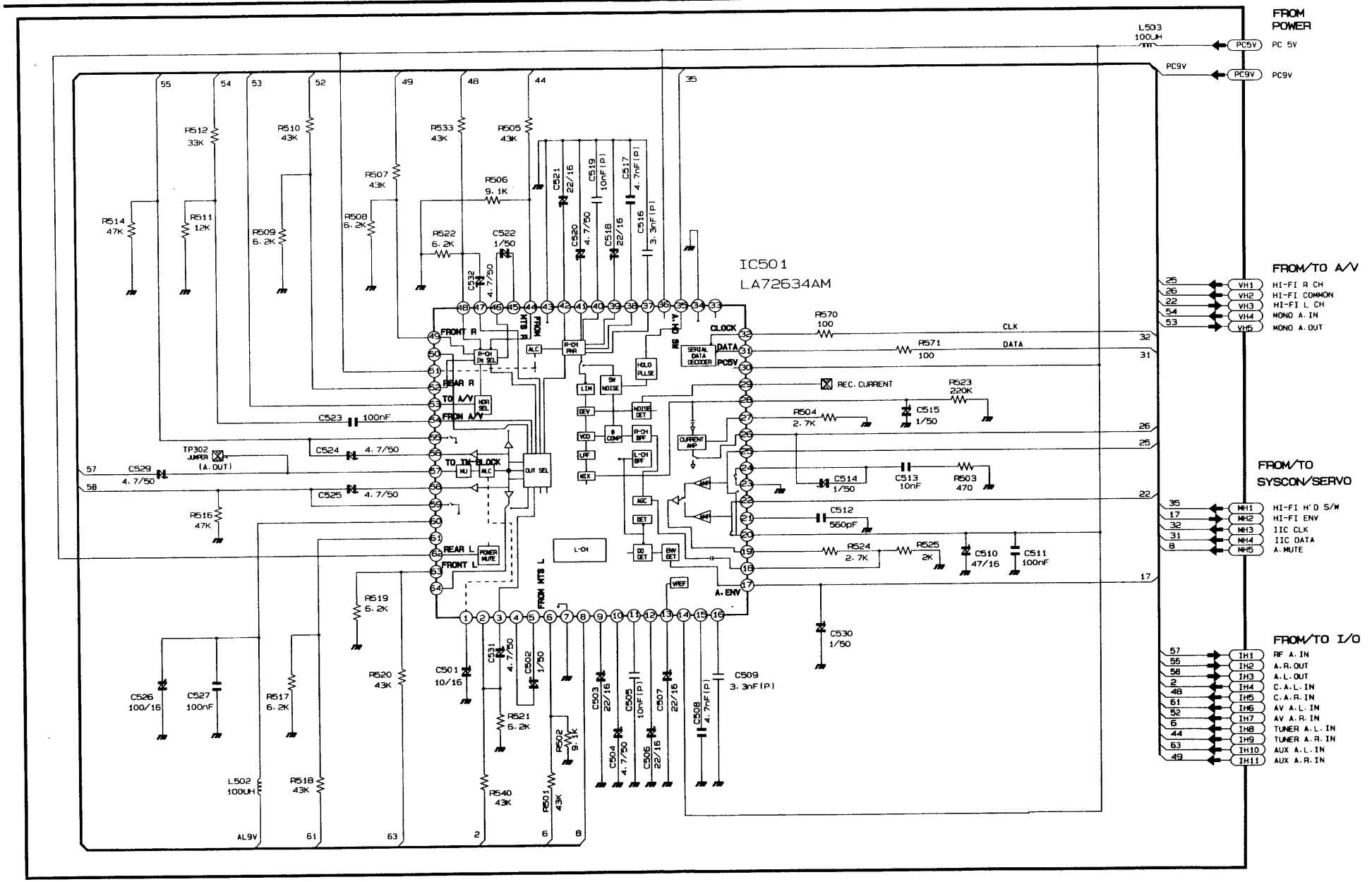
10-5 Audio/Video



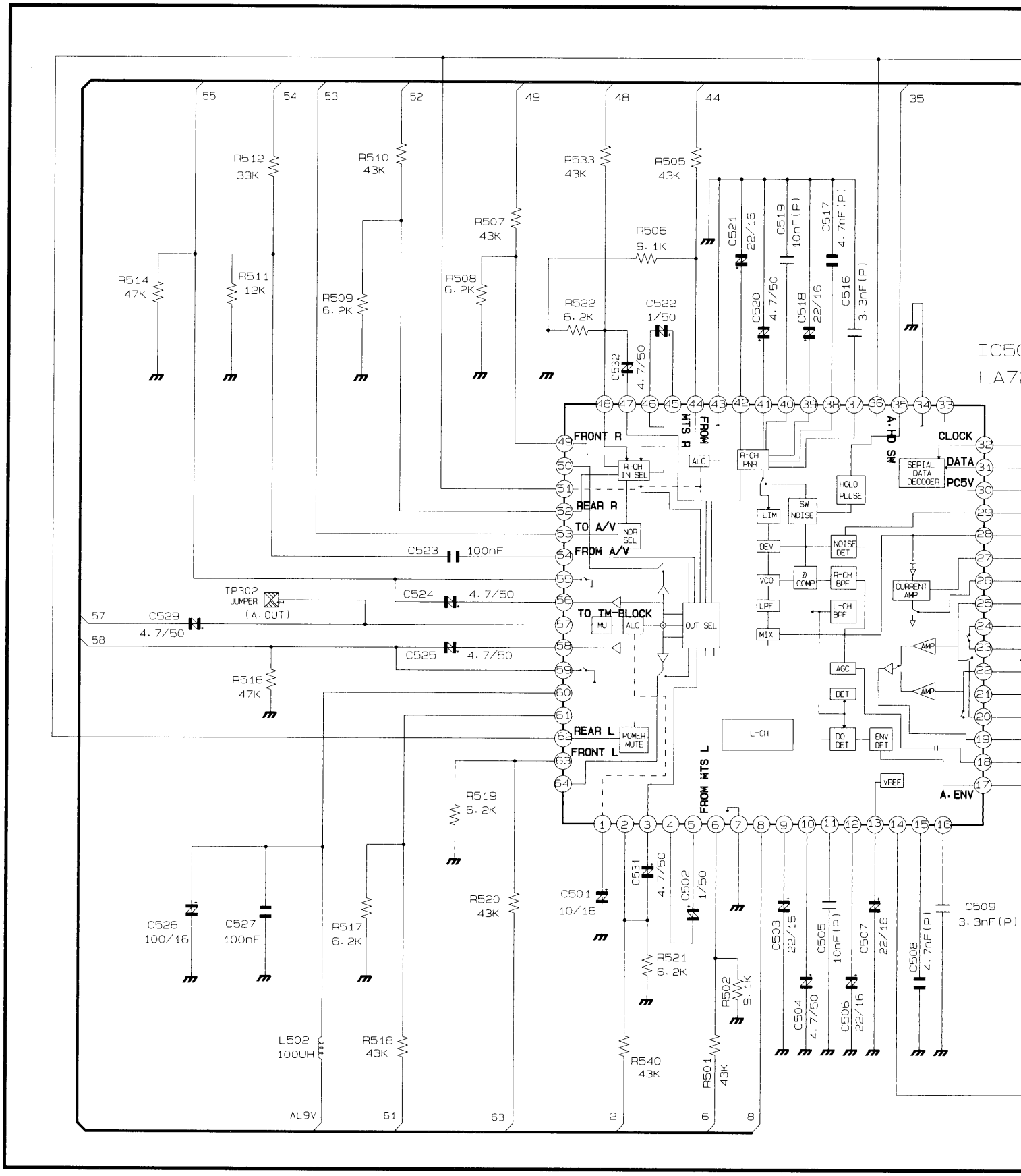

** (P) : POLY TYPE
** (D) : DISC TYPE
** (R) : REDIAL TYPE
AUDIO DUBBING OPTION
A. DUBBING OPTION
WITHOUT/A.DUB OPTION
W279 JUMPER
W/O CANAL MONO OPTION
(*) HIFI OPTION
IC301
PAL ONLY LA71598M
MULTI LA71578M
CN3A02
F/ERASE
GND
TO F/E HEAD
CN3A01
CTL (-)
CTL (+)
GND
PB
REC
A/ERASE
GND
FROM/TO A/C HEAD
W249 JUMPER
W/O A.DUB OPTION
FROM POWER
PC9V
PC 5V
FROM/TO OSD/VPS/PDC
OSD VIDEO IN
OSD VIDEO OUT
2FSC
ENVE-DET
ENVE-COMP
VCR A OUT
AUDIO OUT
MUTE
LINE AMP
ALC
ALC DET
PRE-AMP Part
COMP.OUT
ENV.DET
AUTO BIAS
EQ AMP
REC AMP
LA71570M(MULTI IC ONLY)
ONLY FOR REC IN NTSC MODE
NT3.58 OPTION
DUBBING
FL3A01
FL371
W/O CANAL
NONCANAL 3.9K
CANAL 6.2K
A-MUTE
C-ROTARY
HD-SW
HD-AMP-SW
L303 JUMPER

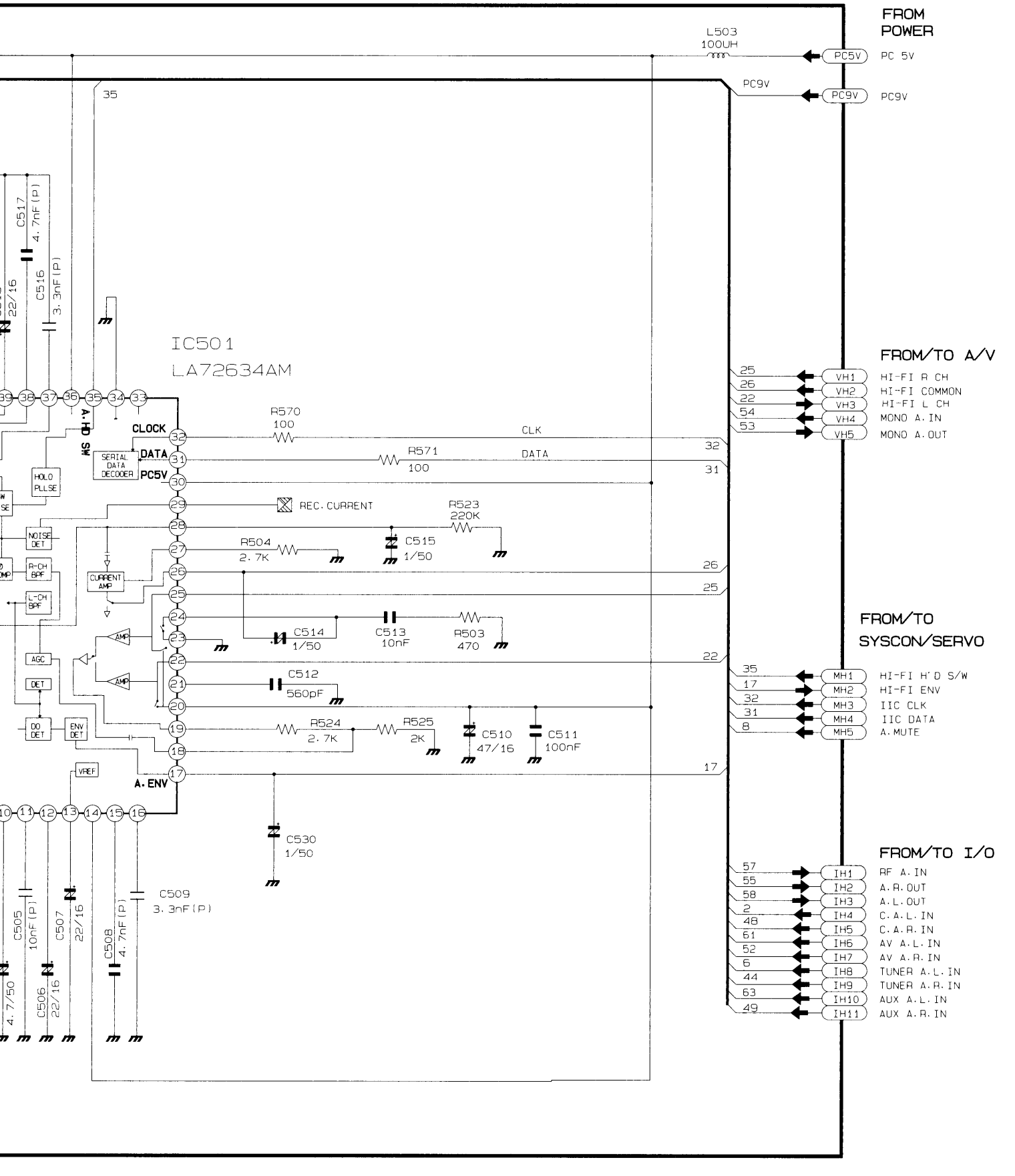

CN301
FROM/TO CYLINDER
FROM/TO HIFI
HI-FI RCH
HI-FI COMMON
HI-FI LCH
MONO A IN
MONO A OUT
TO SECAM
FSC(4.43MHz)
C-SYNC
REC/PB COLOR IN
PB FM OUT
SECAM VIDEO OUT
FROM/TO I/O
AV A.L IN
TU A IN
VCR A OUT
TU V IN
AV V IN
AUX V IN
AUX A.L IN
FROM/TO SYSCON/SERVO
SYNC DET
ENVE COMP
VIDEO ENVE DET
F/ERASE 'H'
CTL(-)
CTL(+)
D REC'H'
C-SYNC
IIC CLK
IIC DATA
V-LOCK
H.D AMP SW
VIDEO H.D SW
C-ROTARY SW
A-MUTE
TRICK 'H'
CCD Part
MULTI OPTION
LP2H'D OPTION
W/O CANAL OPTION
OSD VIDEO OUT
C-SYNC
V-LOCK
I2C-DATA
I2C-CLOCK
ENVE-DET
ENVE-COMP
F/ERASE 'H'
SECAM-VIDEO-OUT
AV A.L IN
VCR A OUT
SECAM-REC/PB
PB-FM
SECAM-VIDEO-OUT
TU V IN
AUX V IN
AUX A.L IN
PC5V
A-MUTE
C-ROTARY
HD-SW
HD-AMP-SW
TRICK 'H'

10-6 Hi-Fi

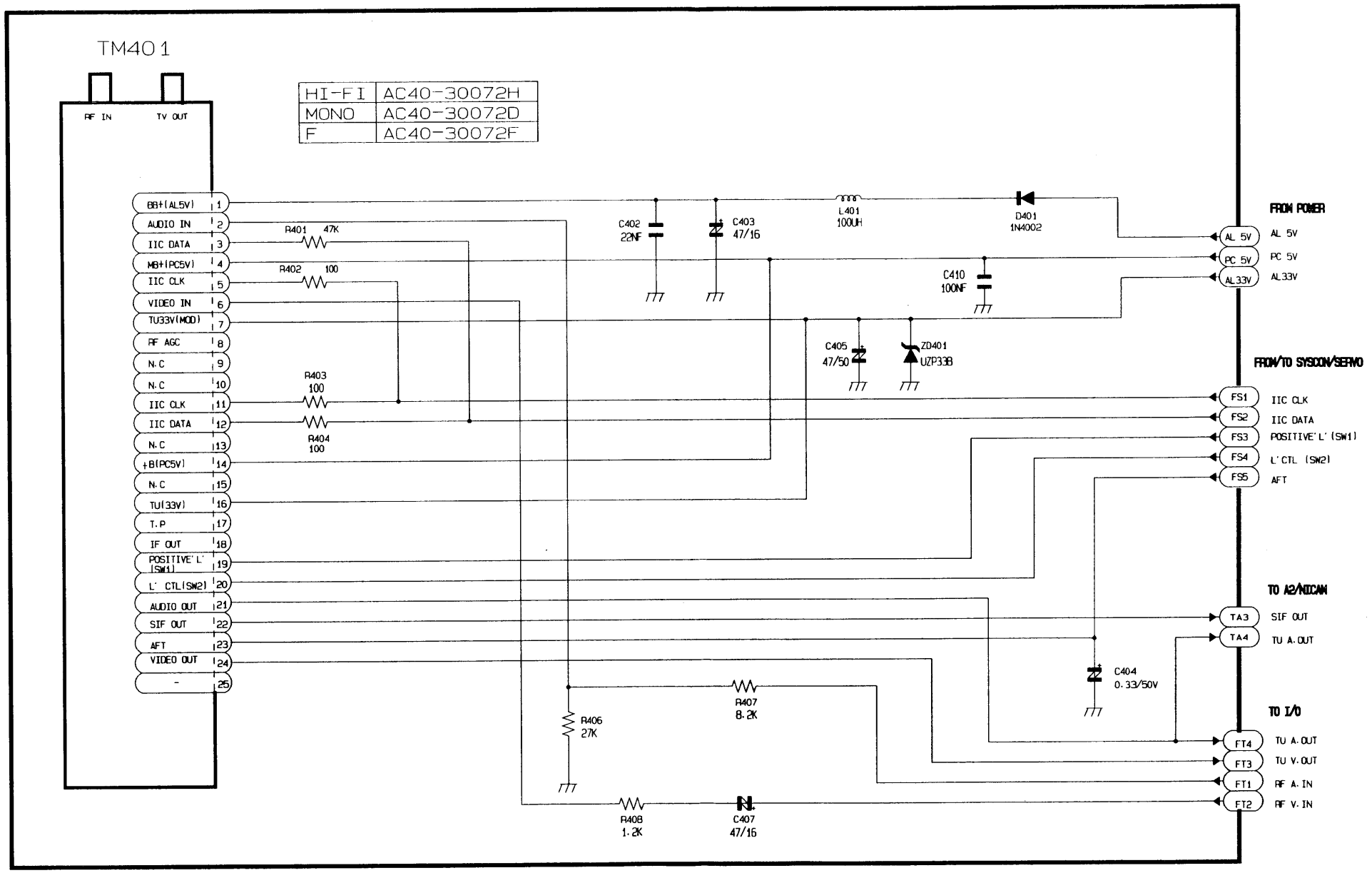

IC501
LA72634AM
FROM POWER
PC 5V
PC9V
FROM/TO A/V
HI-FI R CH
HI-FI COMMON
HI-FI L CH
MONO A. IN
MONO A. OUT
FROM/TO SYSCON/SERVO
HI-FI H'D S/W
HI-FI ENV
IIC CLK
IIC DATA
A. MUTE
FROM/TO I/O
RF A. IN
A.R. OUT
A.L. OUT
C.A.L. IN
C.A.R. IN
AV A.L. IN
AV A.R. IN
TUNER A.L. IN
TUNER A.R. IN
AUX A.L. IN
AUX A.R. IN
CLOCK
DATA
REC. CURRENT
FRONT R
REAR R
FRONT L
REAR L
TO A/V
FROM A/V
TO IN BLOCK
A. ENV

10-6 Hi-Fi

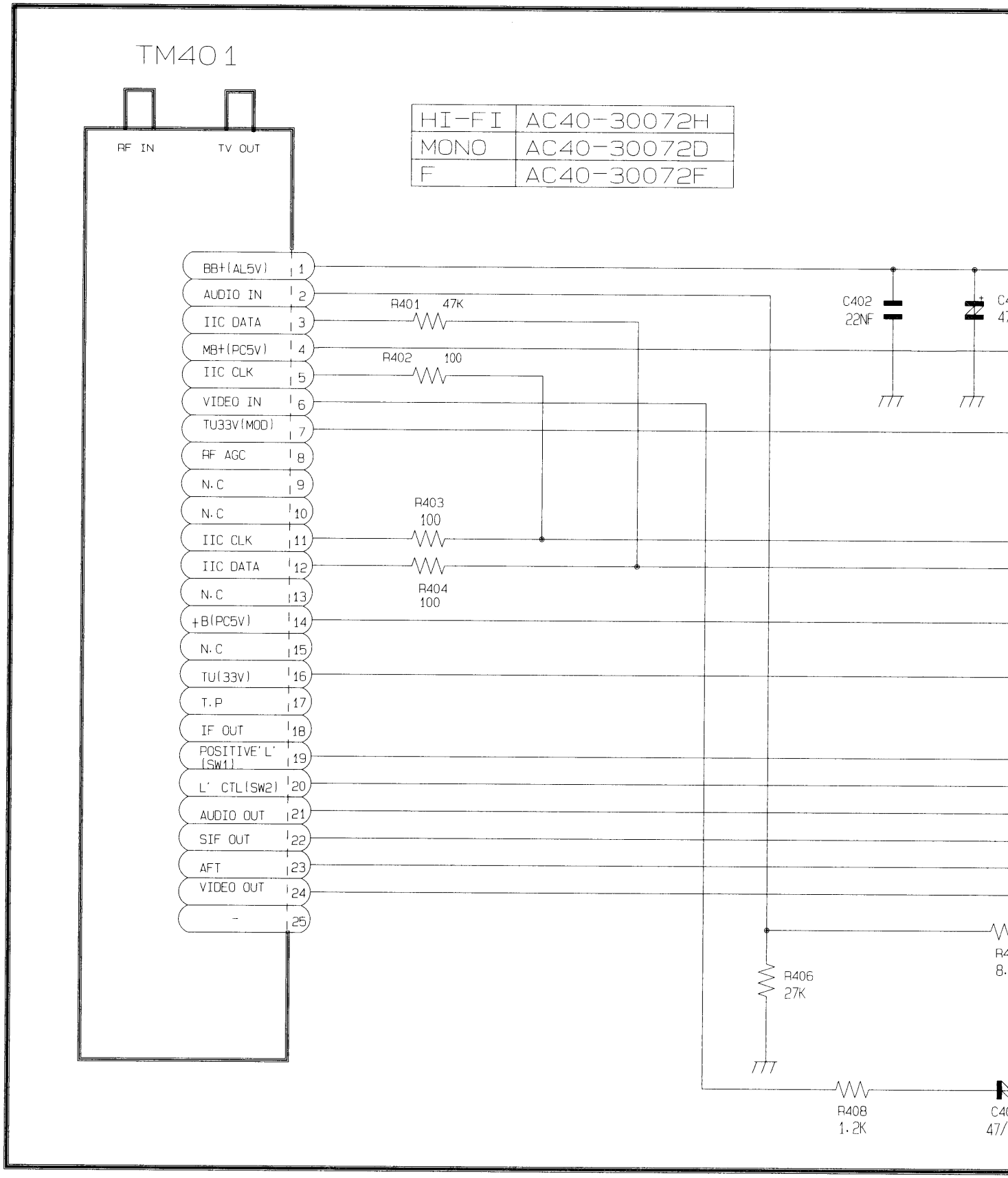

R512 33K
R510 43K
R533 43K
R505 43K
R507 43K
R506 9.1K
R514 47K
R511 12K
R509 6.2K
R508 6.2K
R522 6.2K
C522 1/50
C532 4.7/50
C521 22/16
C519 10nF(P)
C517 4.7nF(P)
C520 4.7/50
C518 22/16
C516 3.3nF(P)
FRONT R
REAR R
TO A/V
FROM A/V
FROM MTS R
A.HD SW
CLOCK
DATA
PC5V
SERIAL DATA DECOODER
R-CH IN SEL
ALC
R-CH PNR
HOLD PLLSE
SW NOISE
LIM
DEV
VCO
LPF
MIX
NOISE DET
Ø COMP
R-CH BPF
L-CH BPF
CURRENT AMP
AMP
AGC
DET
DO DET
ENV DET
VREF
A.ENV
L-CH
NOR SEL
C523 100nF
TP302 JUMPER (A.OUT)
C524 4.7/50
C529 4.7/50
C525 4.7/50
R516 47K
TO TM-BLOCK
MU
OUT SEL
REAR L
FRONT L
POWER MUTE
FROM MTS L
R519 6.2K
R520 43K
C501 10/16
C531 4.7/50
C502 1/50
C526 100/16
C527 100nF
R517 6.2K
R521 6.2K
R502 9.1K
C503 22/16
C505 10nF(P)
C507 22/16
C509 3.3nF(P)
C504 4.7/50
C506 22/16
C508 4.7nF(P)
L502 100UH
R518 43K
R540 43K
R501 43K
AL9V
IC5
LA7

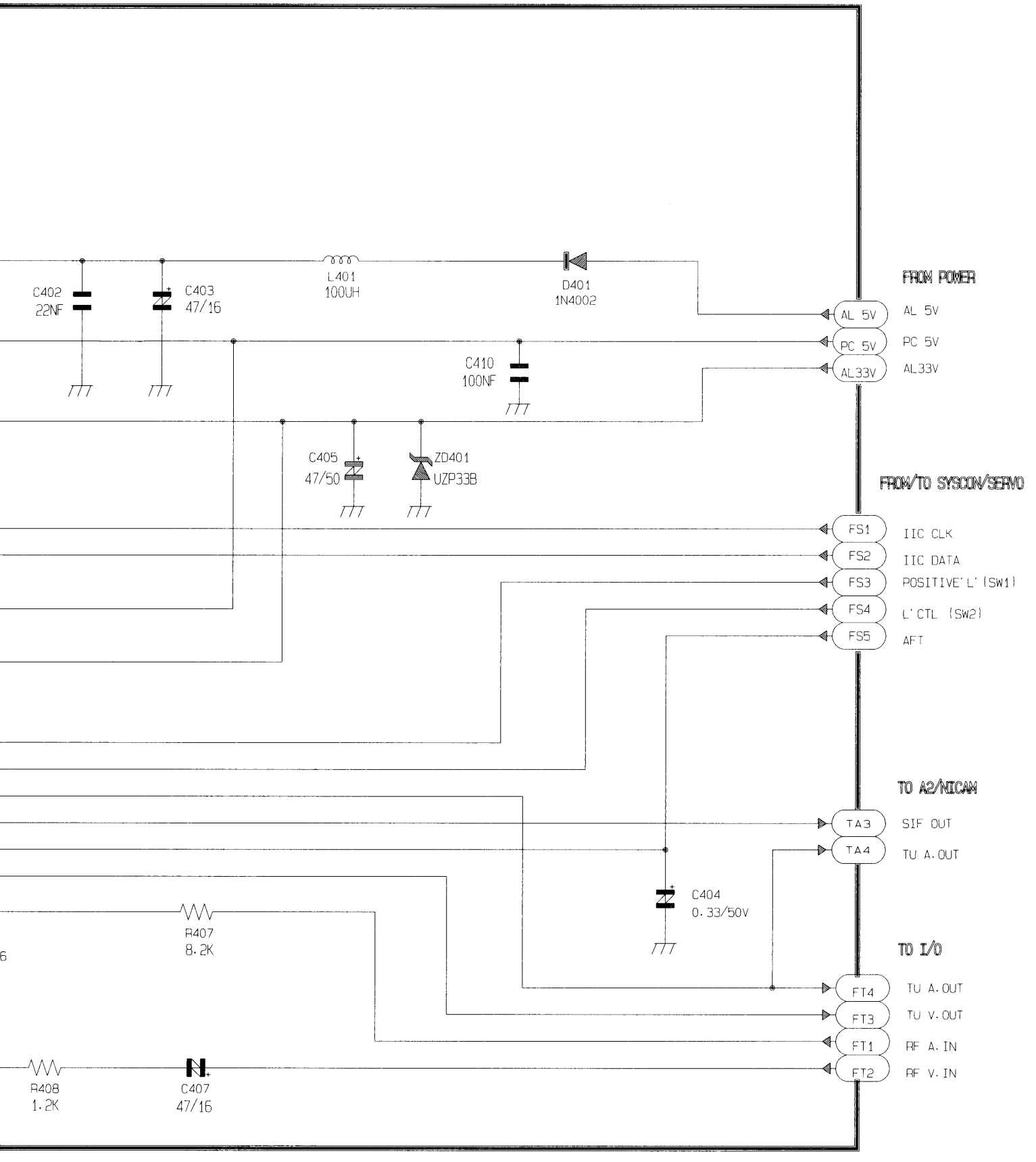

FROM POWER
L503 100UH
PC5V
PC 5V
PC9V
PC9V
35
IC501
LA72634AM
FROM/TO A/V
25 VH1 HI-FI R CH
26 VH2 HI-FI COMMON
22 VH3 HI-FI L CH
54 VH4 MONO A.IN
53 VH5 MONO A.OUT
A.I.F.D.S.
CLOCK
DATA
PC5V
SERIAL DATA DECODER
R570 100
CLK
32
R571 100
DATA
31
REC. CURRENT
R523 220K
R504 2.7K
C515 1/50
CURRENT AMP
C514 1/50
C513 10nF
R503 470
AMP
AGC
DET
C512 560pF
FROM/TO SYSCON/SERVO
35 MH1 HI-FI H'D S/W
17 MH2 HI-FI ENV
32 MH3 IIC CLK
31 MH4 IIC DATA
8 MH5 A.MUTE
DO DET
ENV DET
R524 2.7K
R525 2K
C510 47/16
C511 100nF
VREF
A.ENV
22
17
C530 1/50
FROM/TO I/O
57 IH1 RF A.IN
55 IH2 A.R.OUT
58 IH3 A.L.OUT
2 IH4 C.A.L.IN
48 IH5 C.A.R.IN
61 IH6 AV A.L.IN
52 IH7 AV A.R.IN
6 IH8 TUNER A.L.IN
44 IH9 TUNER A.R.IN
63 IH10 AUX A.L.IN
49 IH11 AUX A.R.IN
C505 10nF(P)
C506 22/16
C507 22/16
C508 4.7nF(P)
C509 3.3nF(P)
C516 3.3nF(P)
C517 4.7nF(P)

10-7 TM-Block

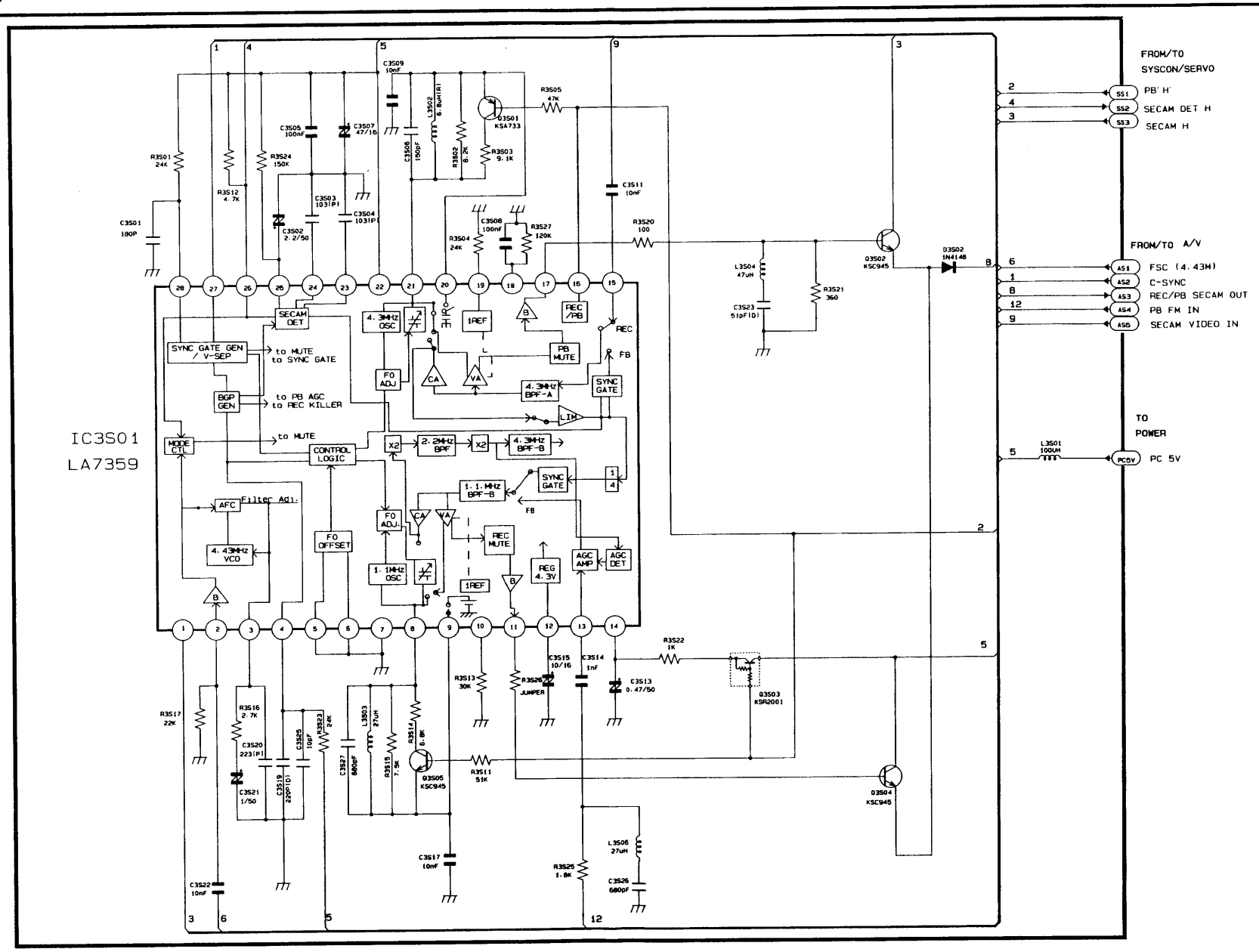

TM401
RF IN
TV OUT
HI-FI AC40-30072H
MONO AC40-30072D
F AC40-30072F
B+(AL5V) 1
AUDIO IN 2
IIC DATA 3
M+(PC5V) 4
IIC CLK 5
VIDEO IN 6
TU33V(MOD) 7
RF AGC 8
N.C 9
N.C 10
IIC CLK 11
IIC DATA 12
N.C 13
+B(PC5V) 14
N.C 15
TU(33V) 16
T.P 17
IF OUT 18
POSITIVE'L' (SW1) 19
L' CTL(SW2) 20
AUDIO OUT 21
SIF OUT 22
AFT 23
VIDEO OUT 24
- 25
R401 47K
R402 100
R403 100
R404 100
C402 22NF
C403 47/16
L401 100UH
D401 1N4002
C410 100NF
C405 47/50
ZD401 UZP33B
R406 27K
R407 8.2K
R408 1.2K
C407 47/16
C404 0.33/50V
FROM POWER
AL 5V
PC 5V
AL33V
FROM/TO SYSCON/SERVO
FS1 IIC CLK
FS2 IIC DATA
FS3 POSITIVE'L' (SW1)
FS4 L'CTL (SW2)
FS5 AFT
TO A2/NICAM
TA3 SIF OUT
TA4 TU A.OUT
TO I/O
FT4 TU A.OUT
FT3 TU V.OUT
FT1 RF A.IN
FT2 RF V.IN

10-7 TM-Block

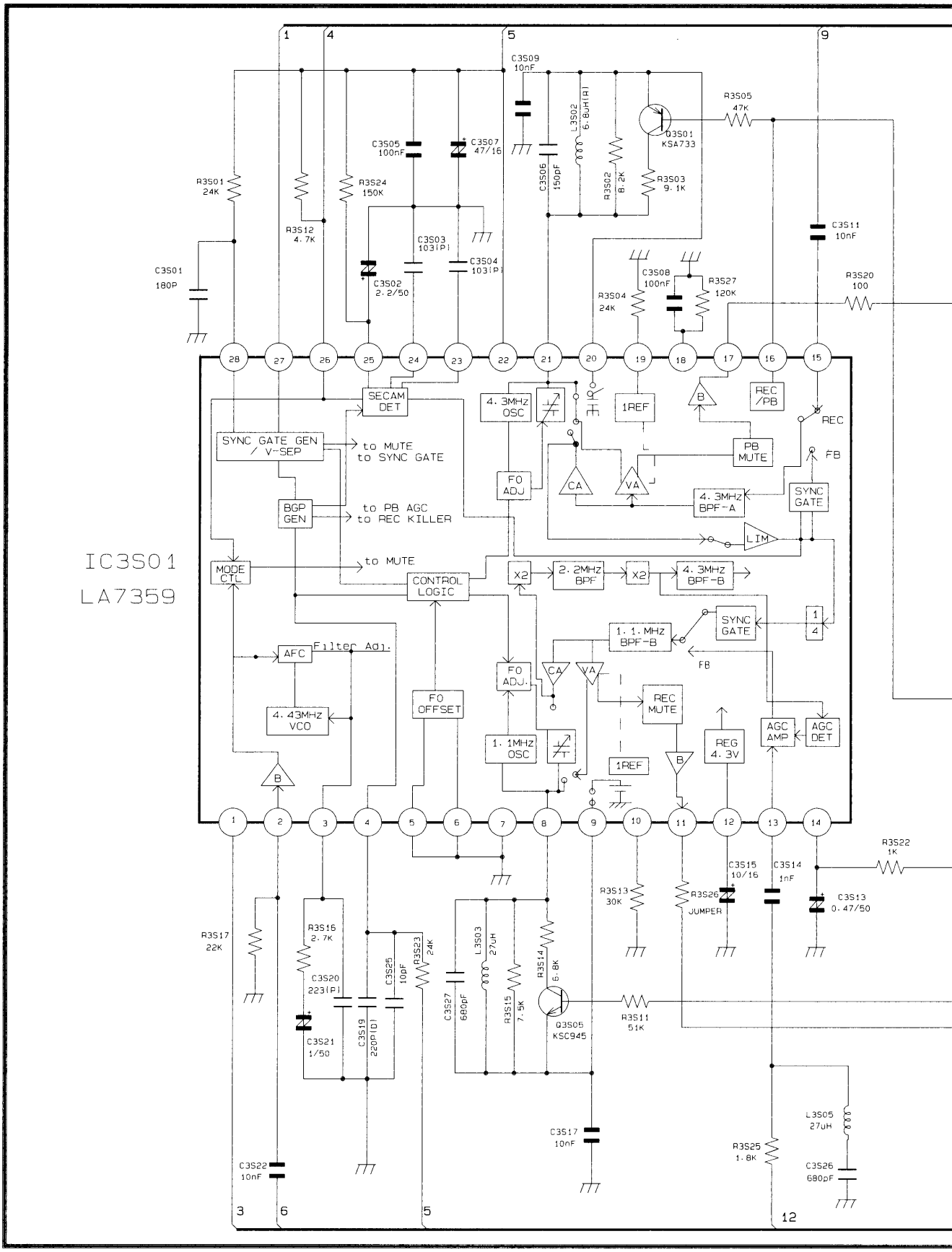

TM401
RF IN
TV OUT
BB+(AL5V) 1
AUDIO IN 2
IIC DATA 3
MB+(PC5V) 4
IIC CLK 5
VIDEO IN 6
TU33V(MOD) 7
RF AGC 8
N.C 9
N.C 10
IIC CLK 11
IIC DATA 12
N.C 13
+B(PC5V) 14
N.C 15
TU(33V) 16
T.P 17
IF OUT 18
POSITIVE'L' (SW1) 19
L' CTL(SW2) 20
AUDIO OUT 21
SIF OUT 22
AFT 23
VIDEO OUT 24
- 25
R401 47K
R402 100
R403 100
R404 100
C402 22NF
R406 27K
R408 1.2K
HI-FI AC40-30072H
MONO AC40-30072D
F AC40-30072F

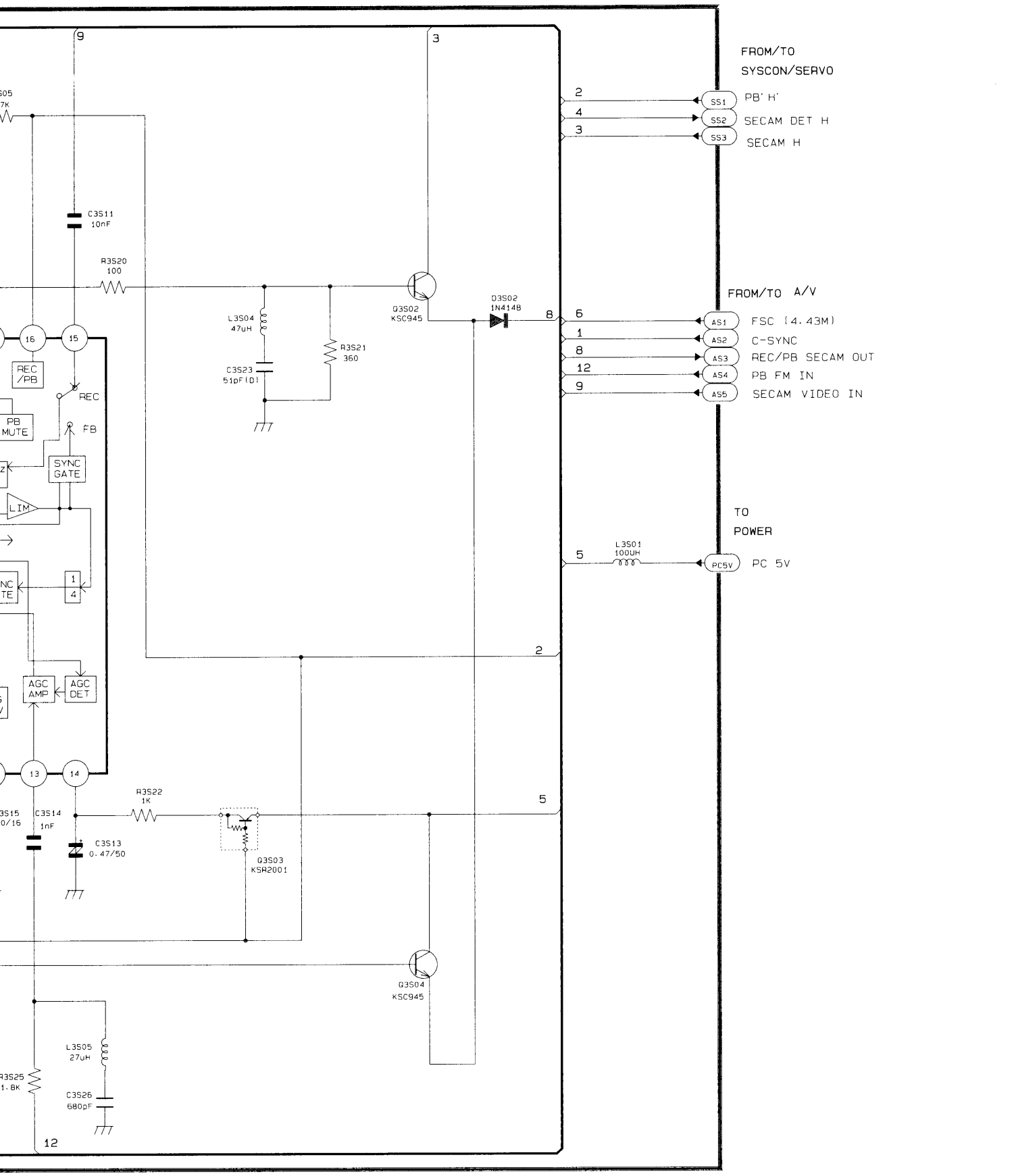

C402
22NF
C403
47/16
L401
100UH
D401
1N4002
C410
100NF
C405
47/50
ZD401
UZP33B
R407
8.2K
R408
1.2K
C407
47/16
C404
0.33/50V
FROM POWER
AL 5V
PC 5V
AL33V
FROM/TO SYSCON/SERVO
FS1
FS2
FS3
FS4
FS5
IIC CLK
IIC DATA
POSITIVE'L' (SW1)
L'CTL (SW2)
AFT
TO A2/NICAM
TA3
TA4
SIF OUT
TU A.OUT
TO I/O
FT4
FT3
FT1
FT2
TU A.OUT
TU V.OUT
RF A.IN
RF V.IN

10-8 SECAM

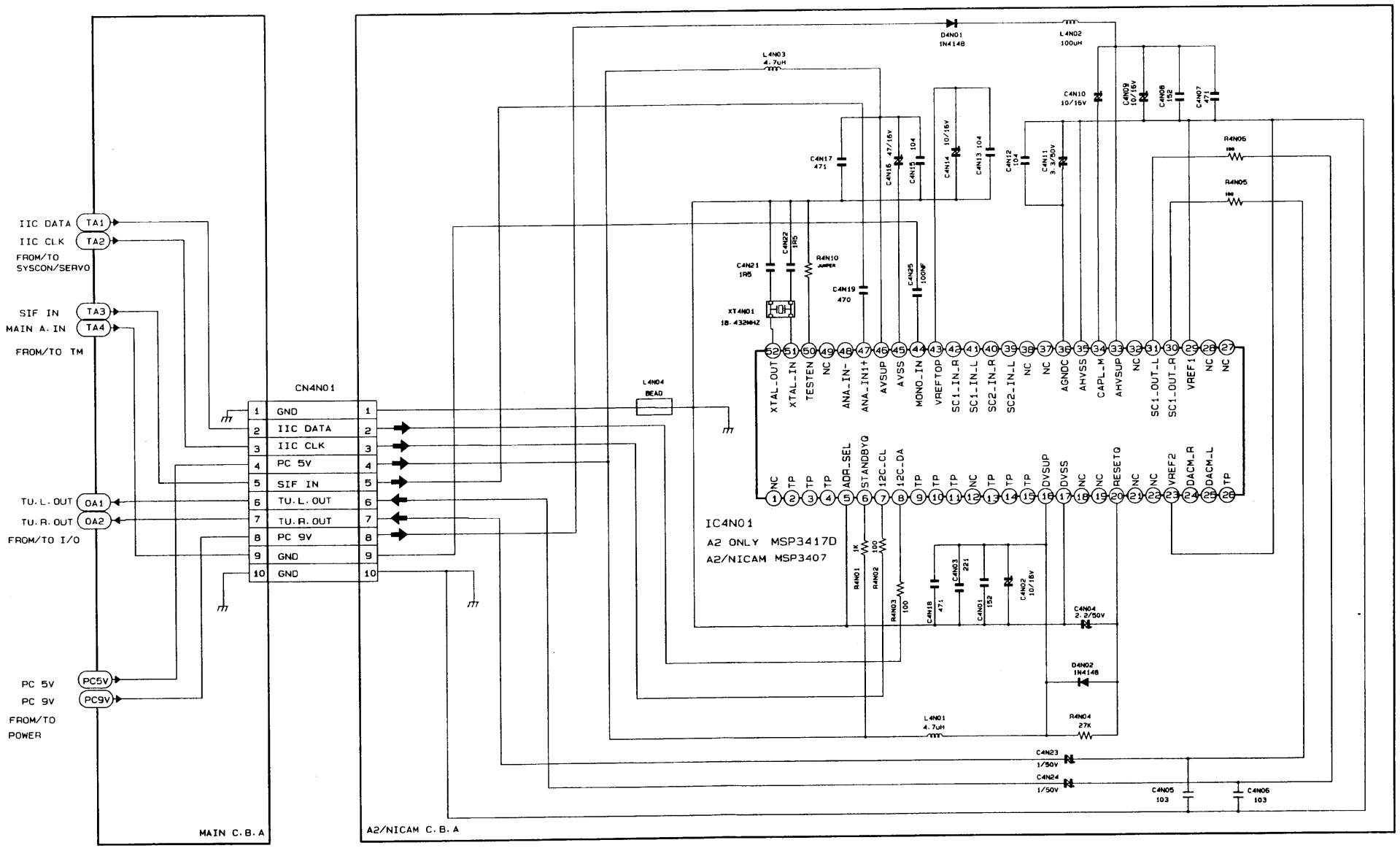

IC3S01
LA7359
FROM/TO
SYSCON/SERVO
PB' H'
SECAM DET H
SECAM H
FROM/TO A/V
FSC (4.43M)
C-SYNC
REC/PB SECAM OUT
PB FM IN
SECAM VIDEO IN
TO
POWER
PC 5V
SECAM DET
SYNC GATE GEN / V-SEP
to MUTE
to SYNC GATE
BGP GEN
to PB AGC
to REC KILLER
MODE CTL
CONTROL LOGIC
4.3MHz OSC
1REF
REC /PB
PB MUTE
REC
FB
FO ADJ
CA
VA
4.3MHz BPF-A
SYNC GATE
LIM
2.2MHz BPF
4.3MHz BPF-B
1.1MHz BPF-B
AFC
Filter Adj.
4.43MHz VCO
FO OFFSET
1.1MHz OSC
REC MUTE
REG 4.3V
AGC AMP
AGC DET
JUMPER
Q3501 KSA733
Q3502 KSC945
Q3503 KSA2001
Q3504 KSC945
Q3505 KSC945
D3S02 1N4148

10-8 SECAM

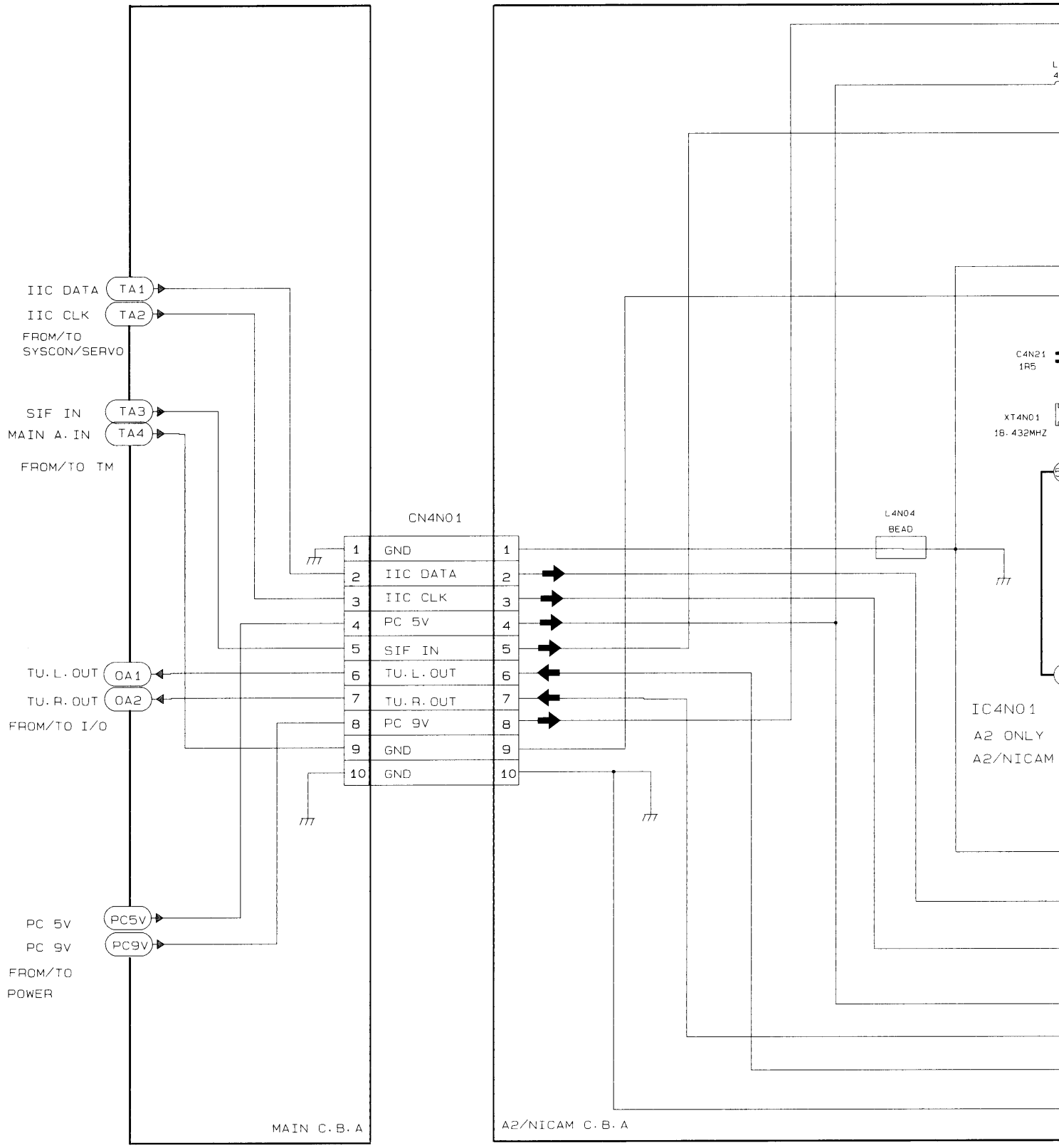

IC3S01
LA7359
SECAM DET
SYNC GATE GEN / V-SEP
to MUTE
to SYNC GATE
BGP GEN
to PB AGC
to REC KILLER
MODE CTL
to MUTE
CONTROL LOGIC
4.3MHz OSC
1REF
REC /PB
REC
PB MUTE
FB
FO ADJ
CA
VA
4.3MHz BPF-A
SYNC GATE
LIM
X2
2.2MHz BPF
X2
4.3MHz BPF-B
1.1MHz BPF-B
SYNC GATE
AFC
Filter Adj.
4.43MHz VCO
FO OFFSET
FO ADJ.
REC MUTE
1.1MHz OSC
1REF
REG 4.3V
AGC AMP
AGC DET
R3S01 24K
R3S12 4.7K
R3S24 150K
C3S05 100nF
C3S07 47/16
C3S09 10nF
C3S06 150pF
L3S02 6.8uH(A)
R3S02 8.2K
Q3S01 KSA733
R3S05 47K
R3S03 9.1K
C3S11 10nF
C3S01 180P
C3S03 103(P)
C3S04 103(P)
C3S02 2.2/50
C3S08 100nF
R3S04 24K
R3S27 120K
R3S20 100
R3S22 1K
C3S15 10/16
C3S14 1nF
C3S13 0.47/50
R3S26 JUMPER
R3S13 30K
R3S17 22K
R3S16 2.7K
C3S20 223(P)
C3S21 1/50
C3S19 220P(D)
C3S25 10pF
R3S23 24K
C3S27 680pF
L3S03 27uH
R3S15 7.5K
R3S14 6.8K
Q3S05 KSC945
R3S11 51K
C3S17 10nF
C3S22 10nF
L3S05 27uH
R3S25 1.8K
C3S26 680pF

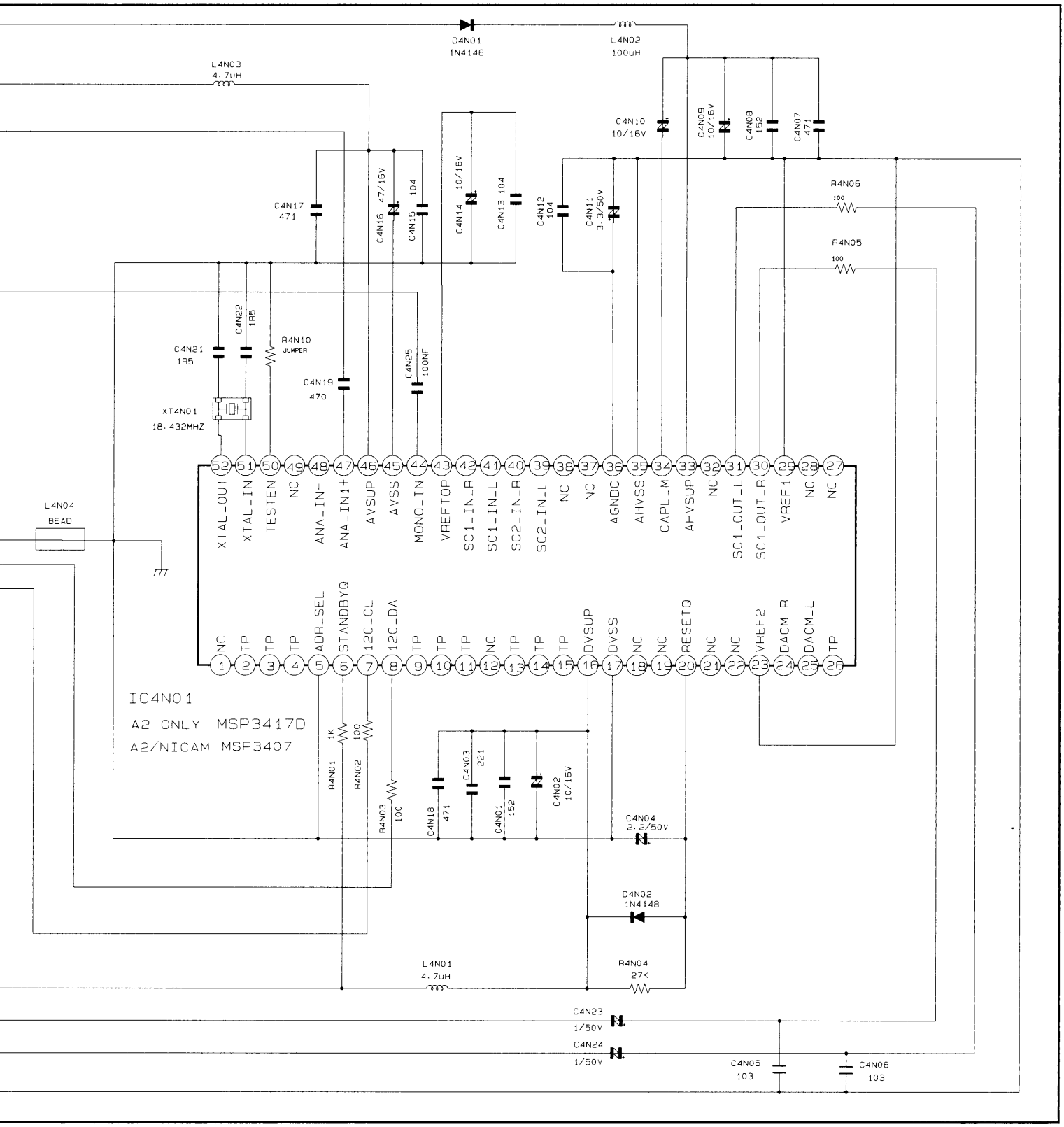

FROM/TO
SYSCON/SERVO
SS1
PB' H'
SS2
SECAM DET H
SS3
SECAM H
FROM/TO A/V
AS1
FSC (4.43M)
AS2
C-SYNC
AS3
REC/PB SECAM OUT
AS4
PB FM IN
AS5
SECAM VIDEO IN
TO
POWER
PC5V
PC 5V
C3S11
10nF
R3S20
100
L3S04
47uH
C3S23
51pF(D)
R3S21
360
Q3S02
KSC945
D3S02
1N414B
REC
/PB
REC
PB
MUTE
FB
SYNC
GATE
LIM
AGC
AMP
AGC
DET
L3S01
100UH
R3S22
1K
C3S14
1nF
C3S13
0.47/50
Q3S03
KSR2001
Q3S04
KSC945
L3S05
27uH
C3S26
680pF

10-9 A2/NICAM

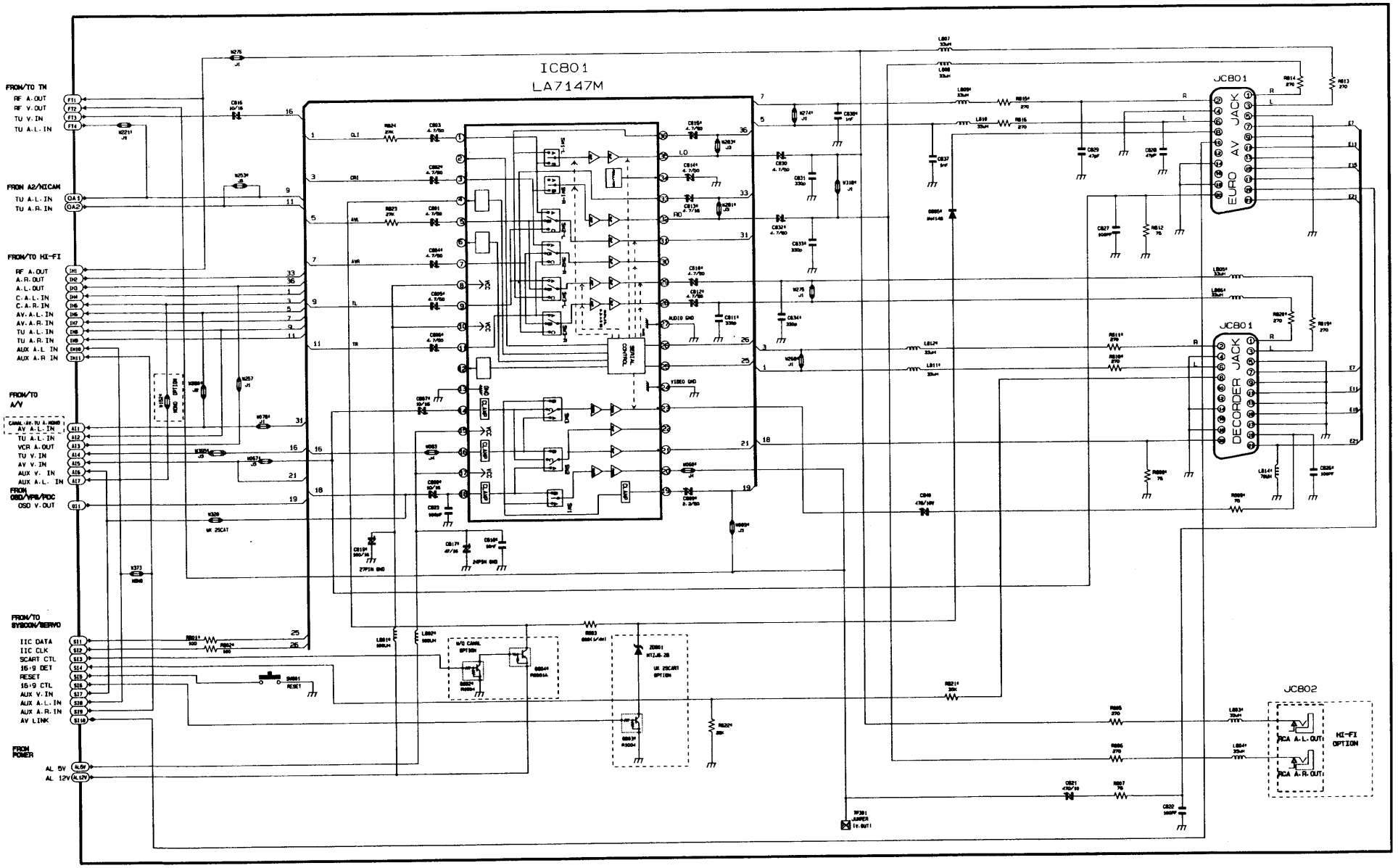

IIC DATA
IIC CLK
FROM/TO SYSCON/SERVO
SIF IN
MAIN A. IN
FROM/TO TM
TU. L. OUT
TU. R. OUT
FROM/TO I/O
PC 5V
PC 9V
FROM/TO POWER
CN4N01
GND
IIC DATA
IIC CLK
PC 5V
SIF IN
TU. L. OUT
TU. R. OUT
PC 9V
GND
GND
IC4N01
A2 ONLY MSP3417D
A2/NICAM MSP3407
MAIN C. B. A
A2/NICAM C. B. A

10-9 A2/NICAM

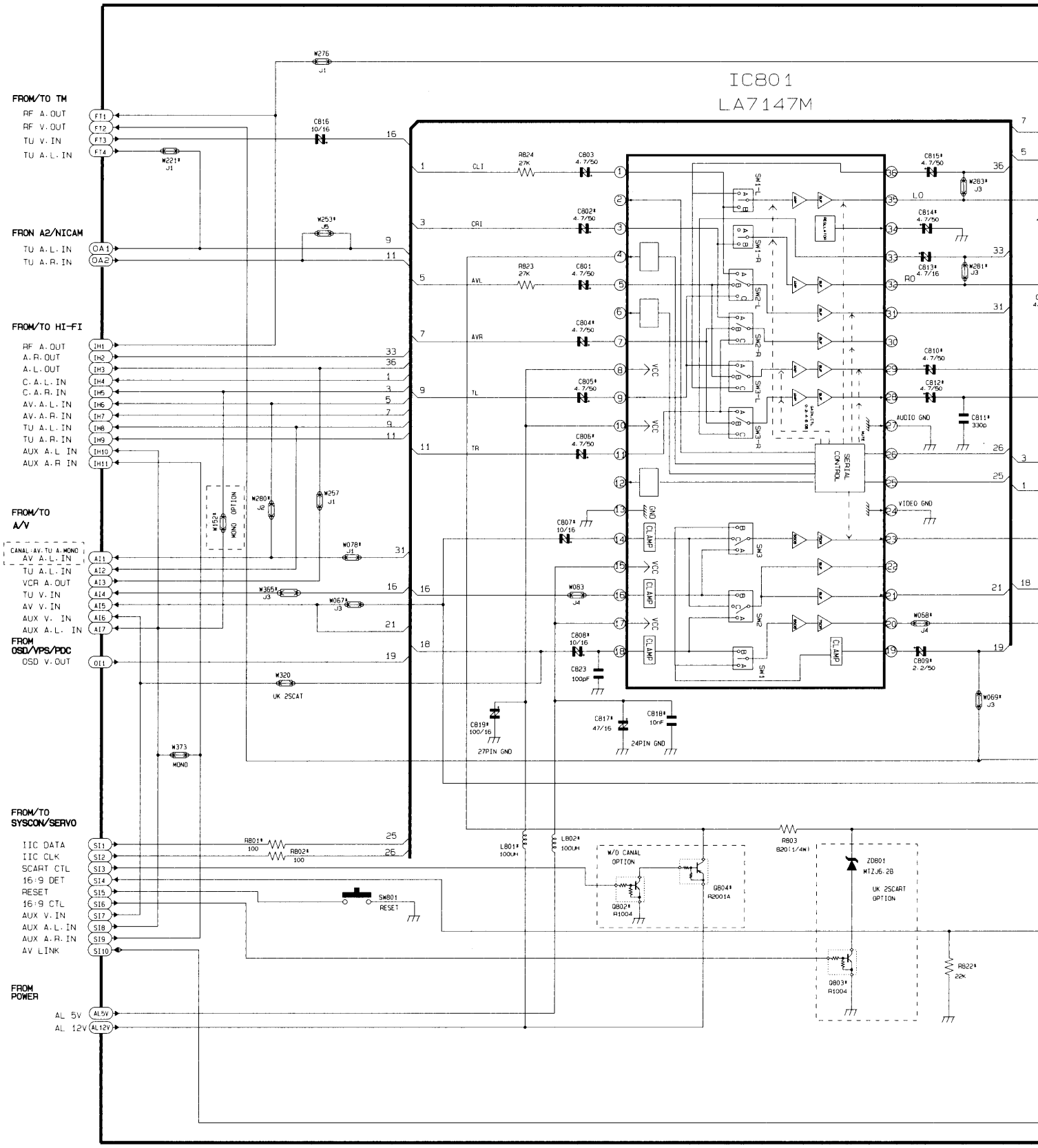

IIC DATA
TA1
IIC CLK
TA2
FROM/TO
SYSCON/SERVO
SIF IN
TA3
MAIN A. IN
TA4
FROM/TO TM
TU. L. OUT
OA1
TU. R. OUT
OA2
FROM/TO I/O
PC 5V
PC5V
PC 9V
PC9V
FROM/TO
POWER
MAIN C. B. A
CN4N01
1 GND 1
2 IIC DATA 2
3 IIC CLK 3
4 PC 5V 4
5 SIF IN 5
6 TU. L. OUT 6
7 TU. R. OUT 7
8 PC 9V 8
9 GND 9
10 GND 10
L4N04
BEAD
C4N21
1R5
XT4N01
16. 432MHZ
IC4N01
A2 ONLY
A2/NICAM
A2/NICAM C. B. A

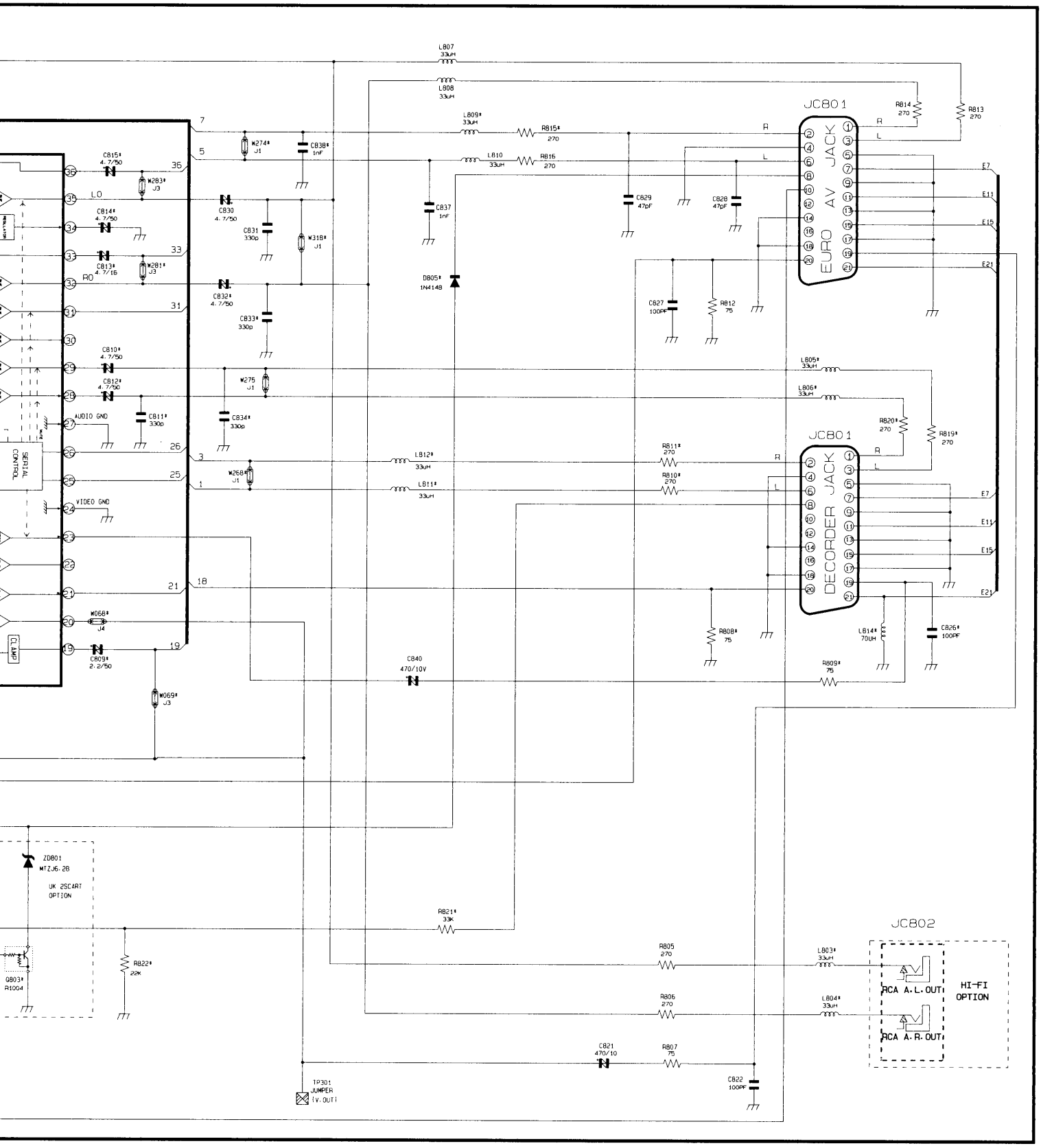

D4N01
1N4148
L4N02
100uH
L4N03
4.7uH
C4N10
10/16V
C4N09
10/16V
C4N08
152
C4N07
471
C4N17
471
C4N16
47/16V
C4N15
104
C4N14
10/16V
C4N13
104
C4N12
104
C4N11
3.3/50V
R4N06
100
R4N05
100
C4N21
1R5
C4N22
1R5
R4N10
JUMPER
C4N19
470
C4N25
100NF
XT4N01
18.432MHZ
L4N04
BEAD
XTAL_OUT
XTAL_IN
TESTEN
NC
ANA_IN-
ANA_IN1+
AVSUP
AVSS
MONO_IN
VREFTOP
SC1_IN_R
SC1_IN_L
SC2_IN_R
SC2_IN_L
NC
NC
AGNDC
AHVSS
CAPL_M
AHVSUP
NC
SC1_OUT_L
SC1_OUT_R
VREF1
NC
NC
NC
TP
TP
TP
ADR_SEL
STANDBYQ
I2C_CL
I2C_DA
TP
TP
TP
NC
TP
TP
TP
DVSUP
DVSS
NC
NC
RESETQ
NC
NC
VREF2
DACM_R
DACM_L
TP
IC4N01
A2 ONLY MSP3417D
A2/NICAM MSP3407
R4N01
1K
R4N02
100
R4N03
100
C4N18
471
C4N03
221
C4N01
152
C4N02
10/16V
C4N04
2.2/50V
D4N02
1N4148
L4N01
4.7uH
R4N04
27K
C4N23
1/50V
C4N24
1/50V
C4N05
103
C4N06
103

10-10 Input-Output (2 Scart)

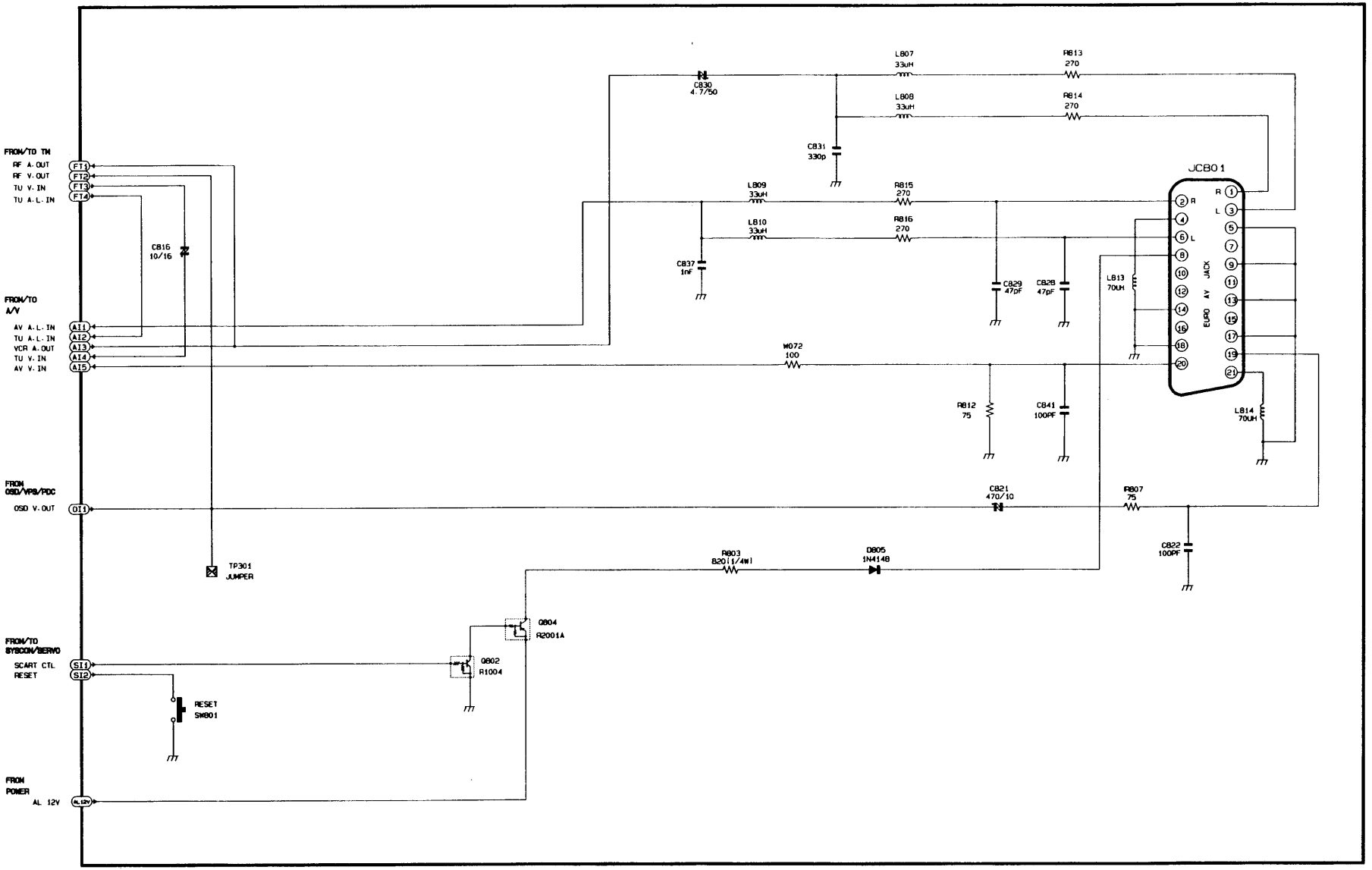


10-10 Input-Output (2 Scart)

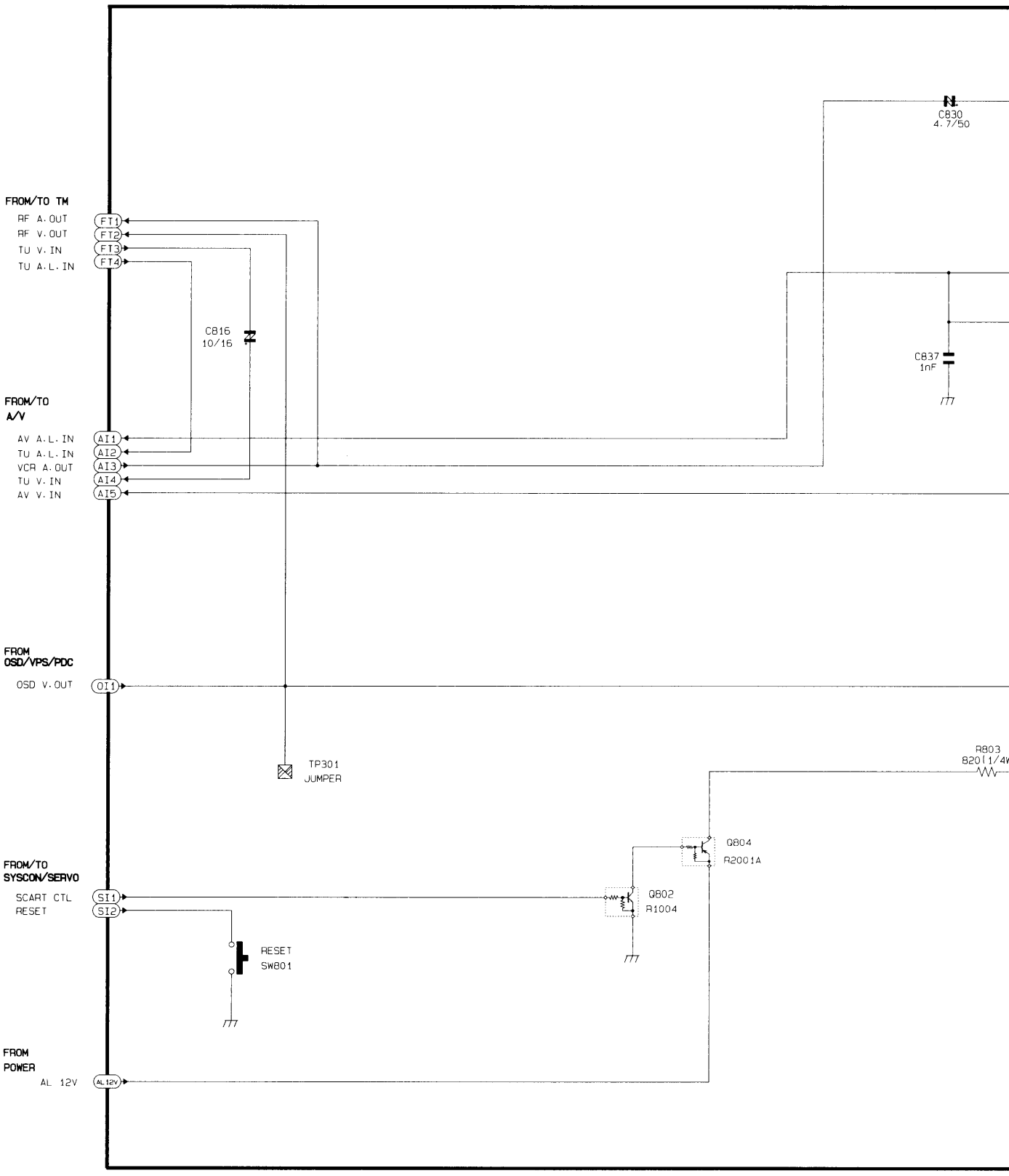


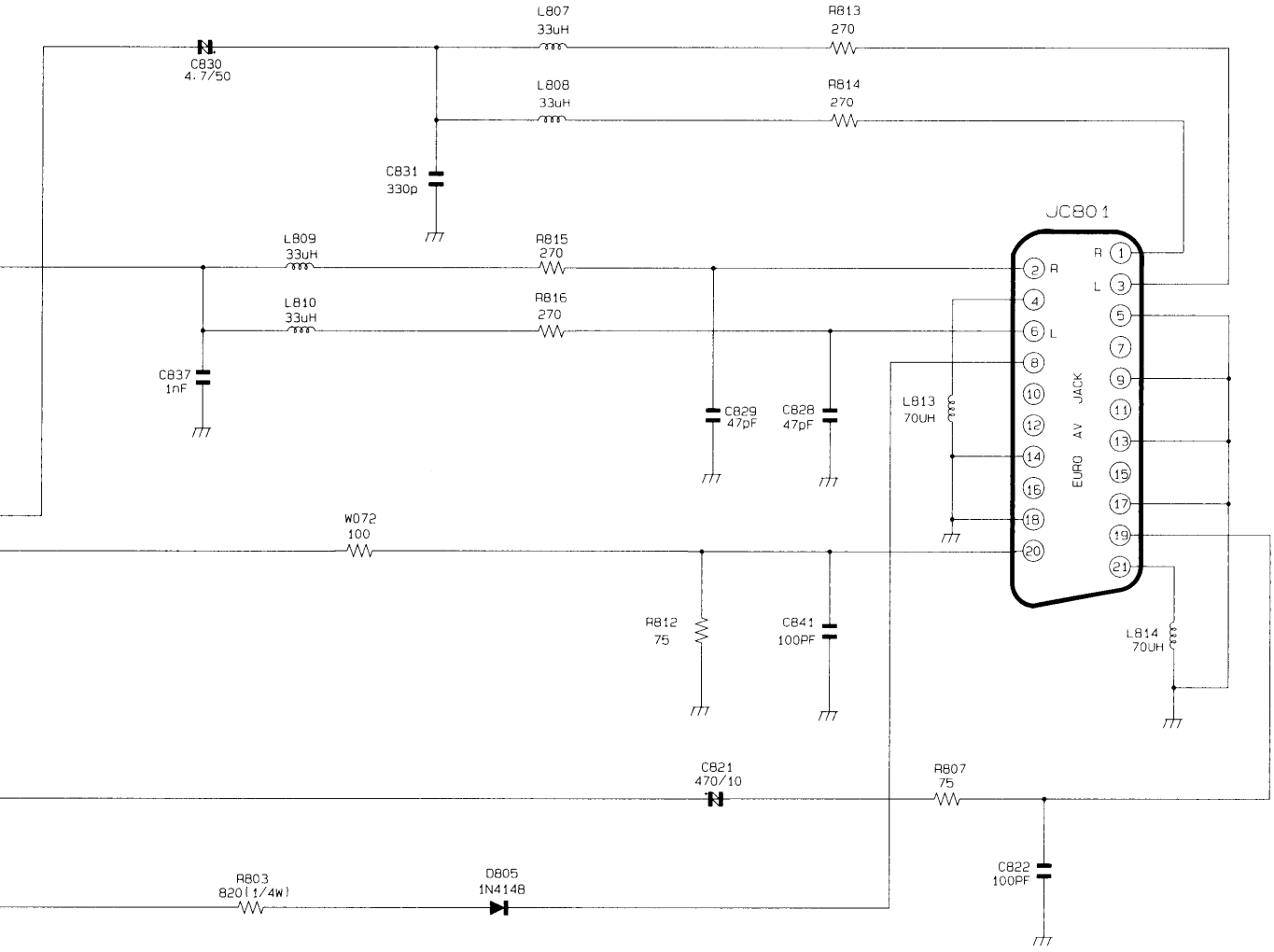

L807 33uH
L808 33uH
JC801
EURO AV JACK
DECORDER JACK
R814 270
R813 270
L809* 33uH
R815* 270
L810 33uH
R816 270
C829 47pF
C828 47pF
C837 1nF
C627 100PF
R812 75
D805* 1N4148
L805* 33uH
L806* 33uH
R820* 270
R819* 270
R811* 270
R810* 270
L812* 33uH
L811* 33uH
R808* 75
L814* 70uH
C826* 100PF
R809* 75
C840 470/10V
C815* 4.7/50
W283* J3
C814* 4.7/50
C813* 4.7/16
W281* J3
C810* 4.7/50
C812* 4.7/50
C811* 330p
W274* J1
C838* 1nF
C830 4.7/50
C831 330p
W318* J1
C832* 4.7/50
C833* 330p
W275 J1
C834* 330p
W268* J1
W068* J4
C809* 2.2/50
W069* J3
LO
RO
AUDIO GND
VIDEO GND
SERIAL CONTROL
CLAMP
ZD801 MTZJ6.2B
UK 2SCART OPTION
Q803* R1004
R822* 22K
R821* 33K
R805 270
R806 270
C821 470/10
R807 75
C822 100PF
TP301 JUMPER 1V.OUT
JC802
L803* 33uH
L804* 33uH
RCA A.L.OUT
RCA A.R.OUT
HI-FI OPTION

10-11 Input-Output (1 Scart)

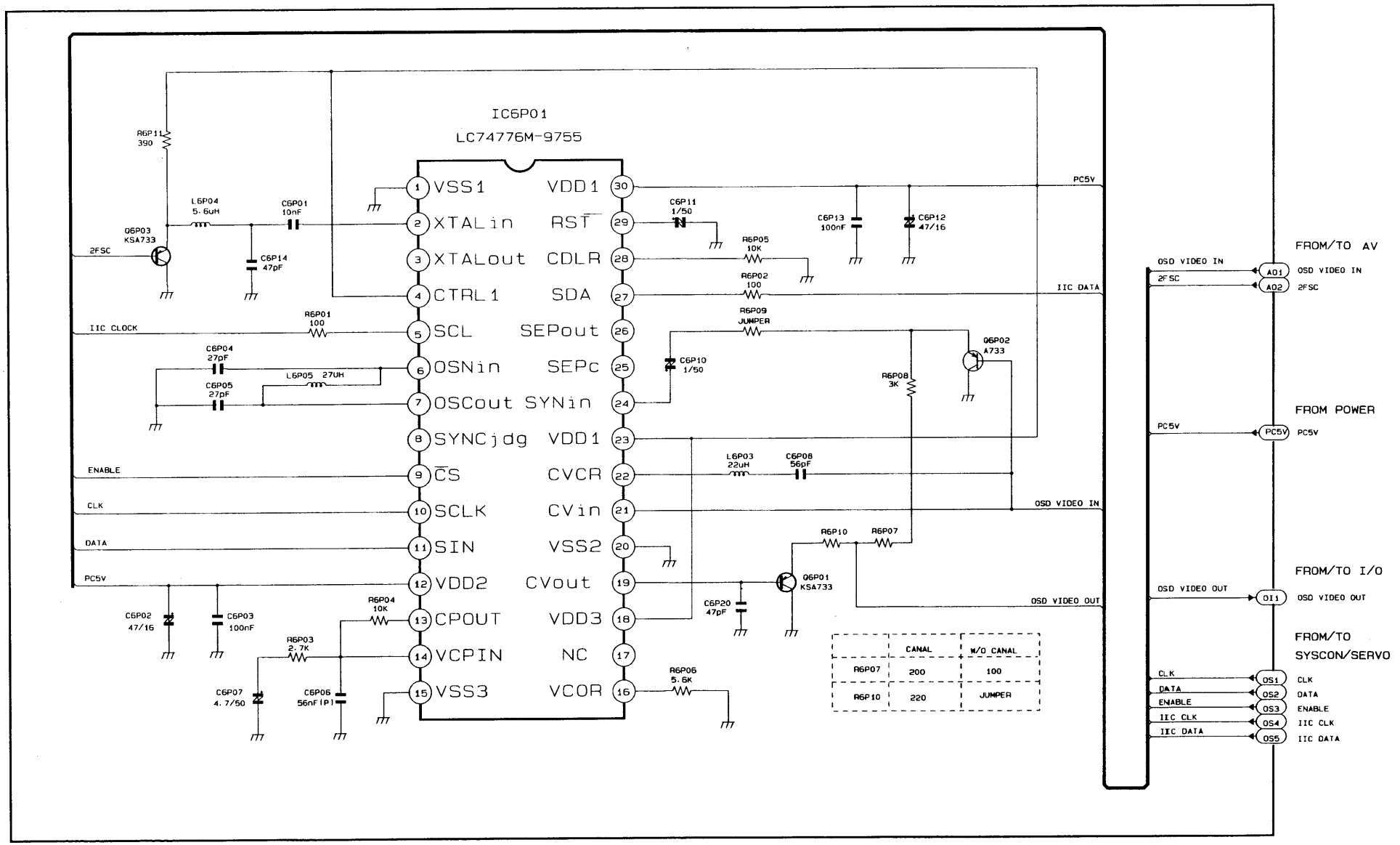


10-11 Input-Output (1 Scart)

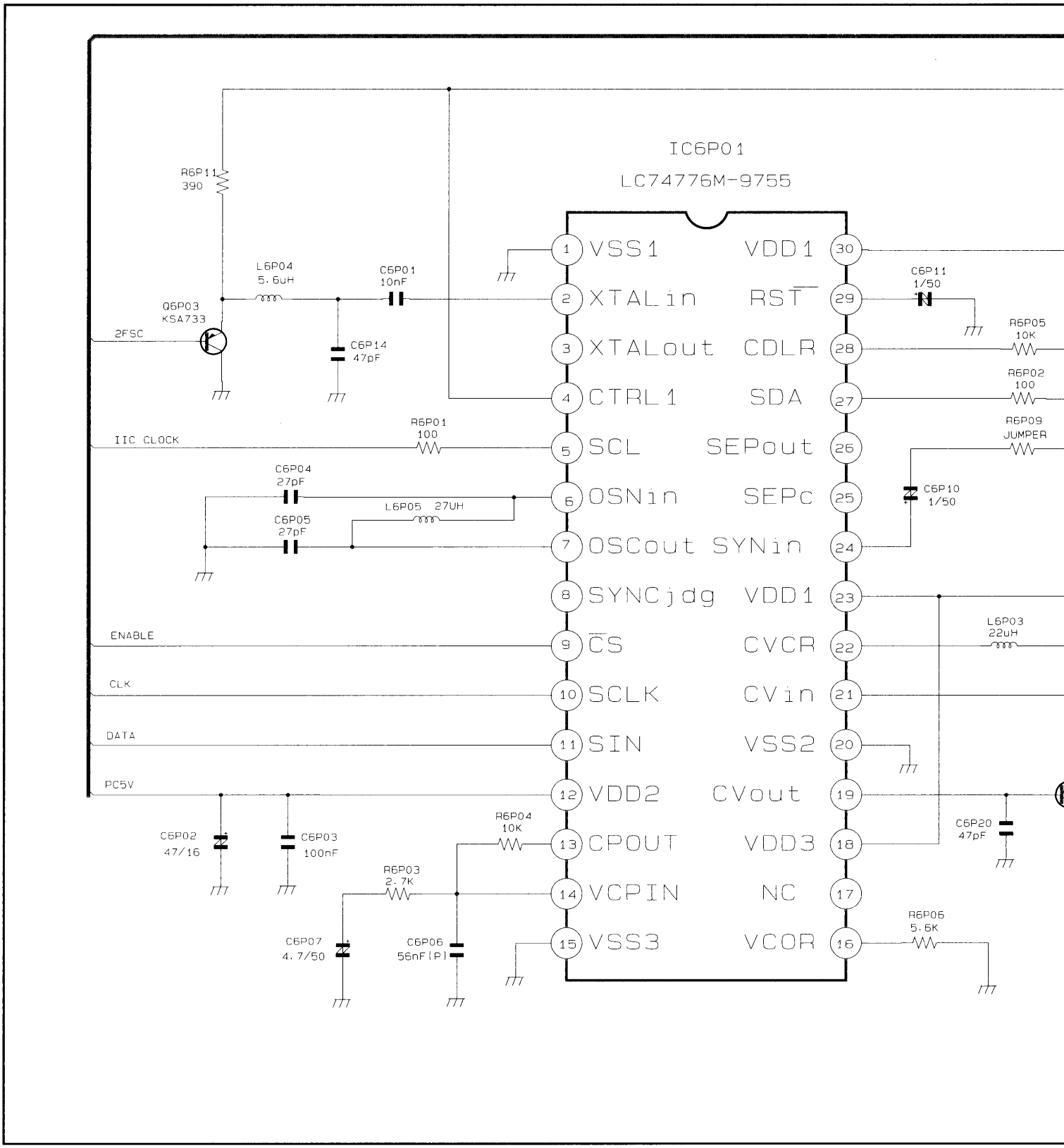


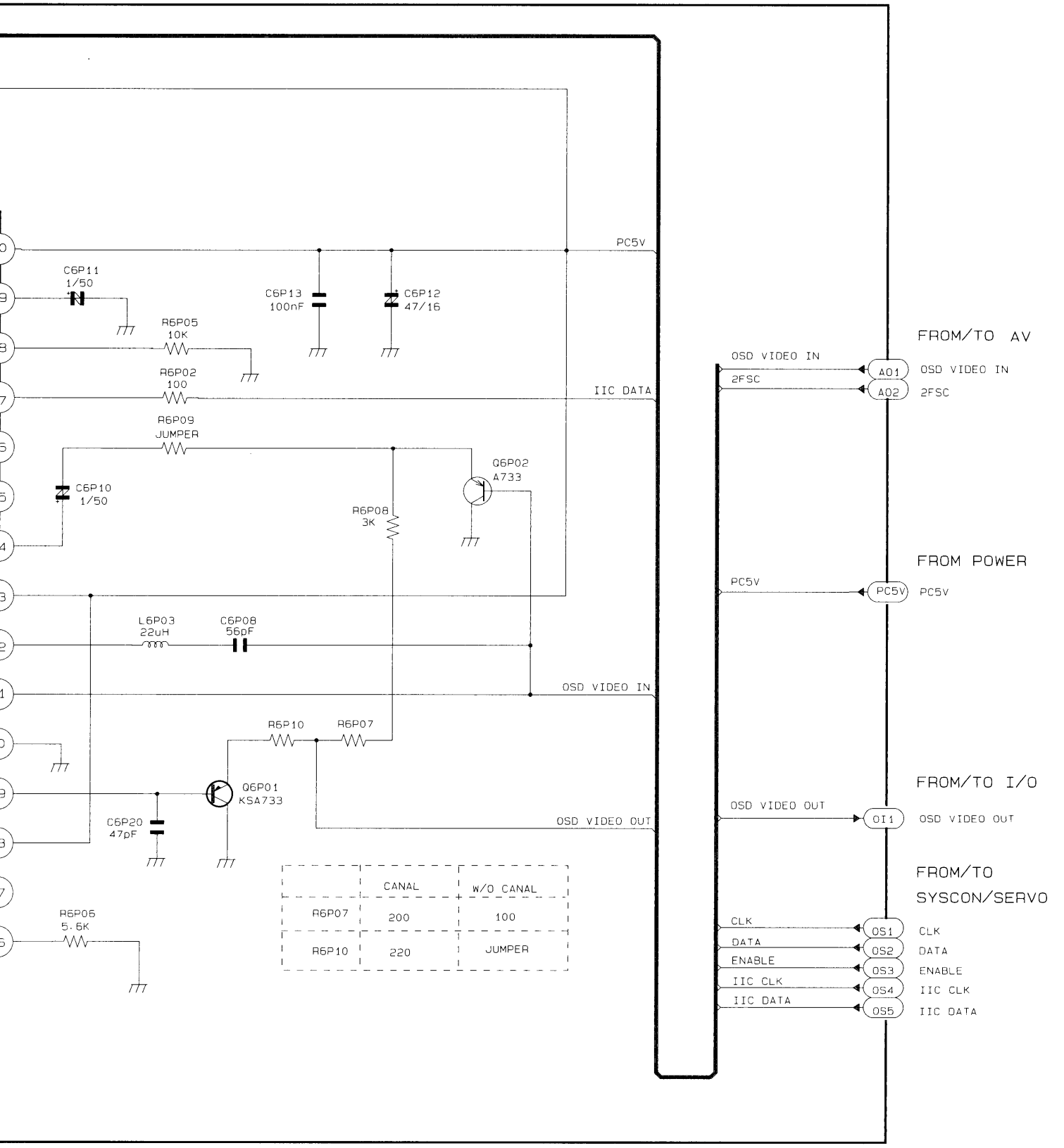

L807
33uH
R813
270
C830
4.7/50
L808
33uH
R814
270
C831
330p
JC801
L809
33uH
R815
270
R
L
L810
33uH
R816
270
C837
1nF
C829
47pF
C828
47pF
L813
70UH
EURO AV JACK
W072
100
R812
75
C841
100PF
L814
70UH
C821
470/10
R807
75
C822
100PF
R803
820(1/4W)
D805
1N4148

10-12 OSD/VPS/PCD

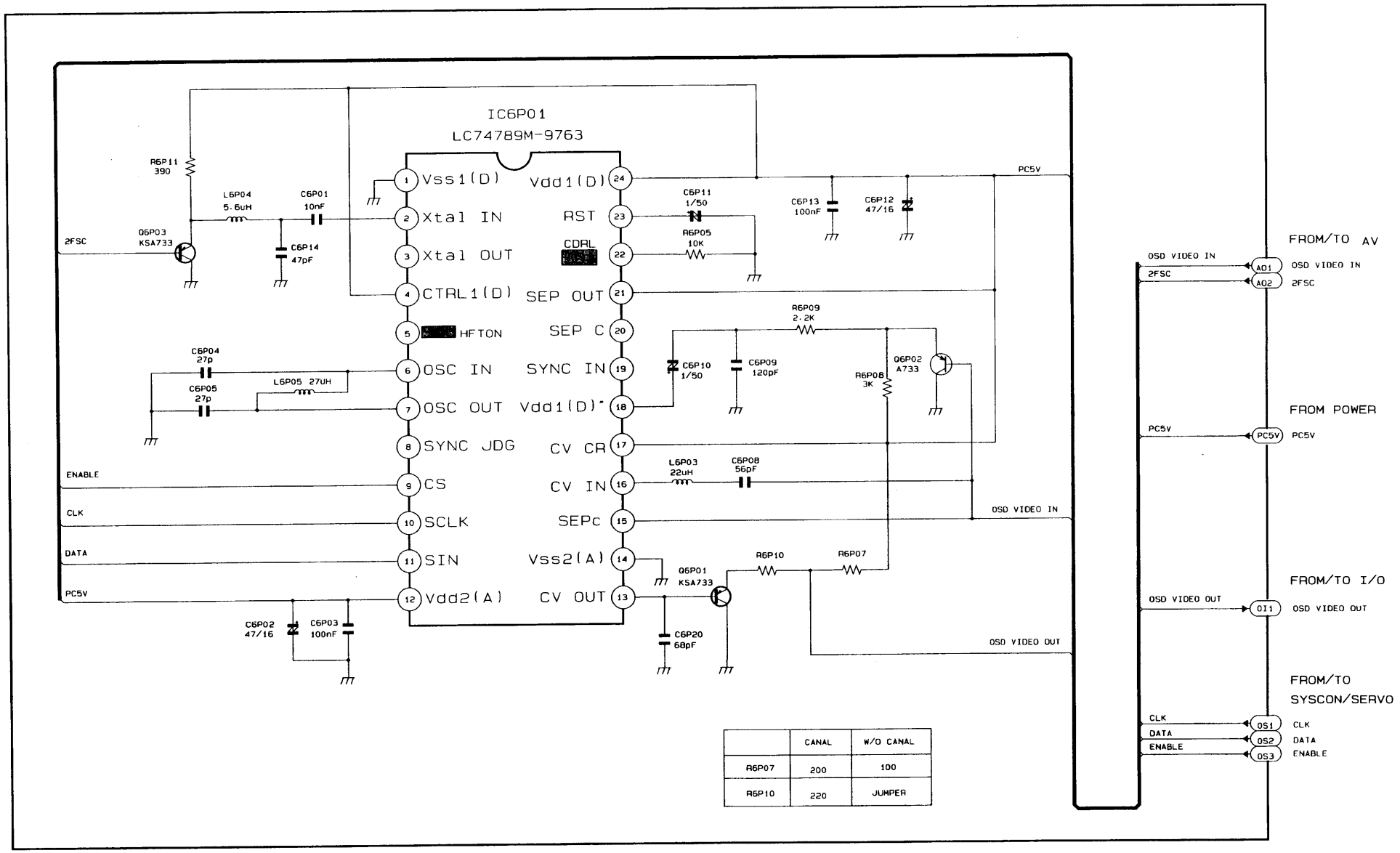


10-12 OSD/VPS/PCD



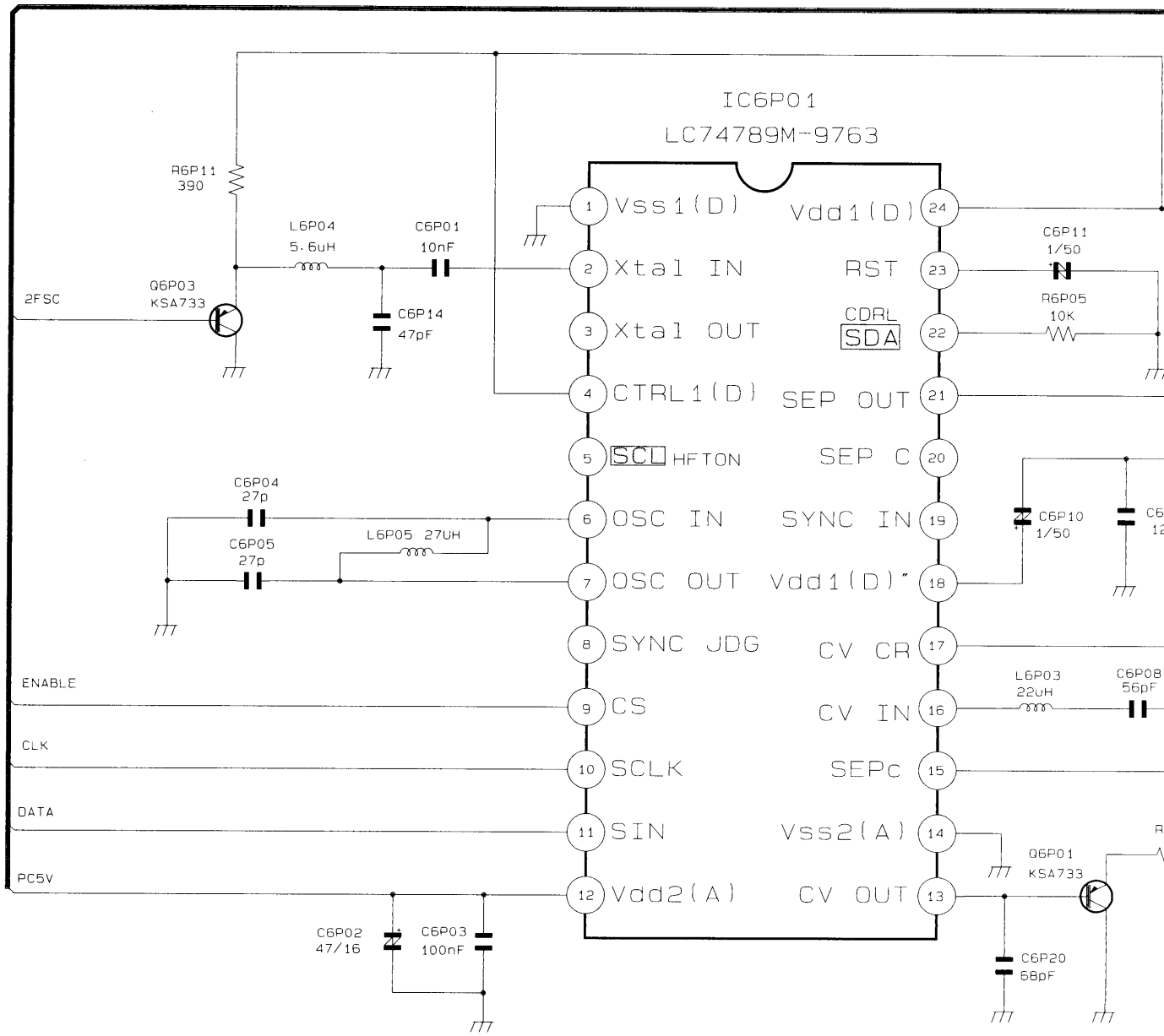

PC5V
C6P11
1/50
C6P13
100nF
C6P12
47/16
R6P05
10K
R6P02
100
IIC DATA
R6P09
JUMPER
C6P10
1/50
Q6P02
A733
R6P08
3K
L6P03
22uH
C6P08
56pF
OSD VIDEO IN
R6P10
R6P07
Q6P01
KSA733
C6P20
47pF
OSD VIDEO OUT
R6P06
5.6K
CANAL
W/O CANAL
R6P07
200
100
R6P10
220
JUMPER
FROM/TO AV
OSD VIDEO IN
2FSC
A01
A02
OSD VIDEO IN
2FSC
FROM POWER
PC5V
PC5V
PC5V
FROM/TO I/O
OSD VIDEO OUT
OI1
OSD VIDEO OUT
FROM/TO
SYSCON/SERVO
CLK
DATA
ENABLE
IIC CLK
IIC DATA
OS1
OS2
OS3
OS4
OS5
CLK
DATA
ENABLE
IIC CLK
IIC DATA

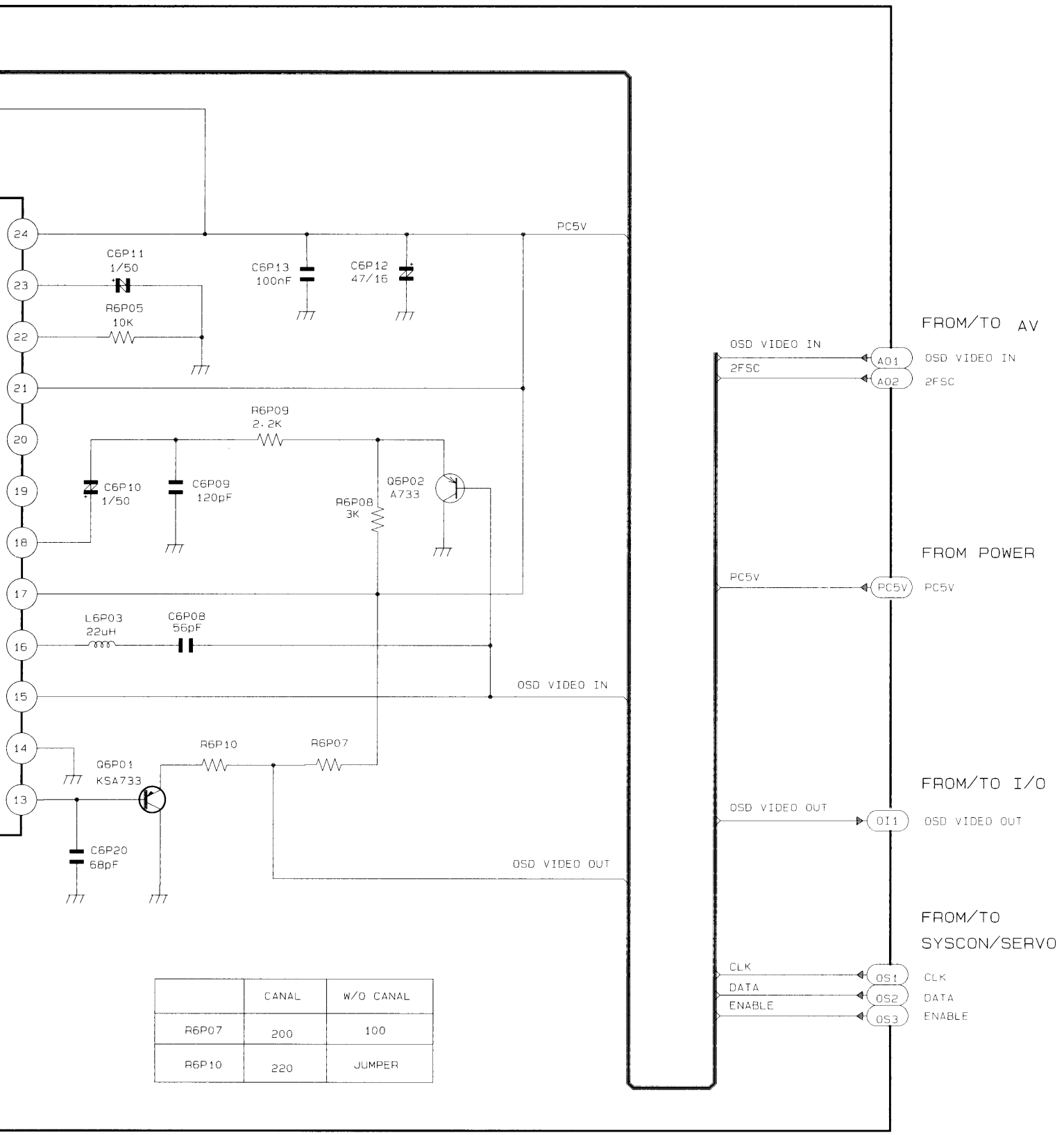
10-13 OSD (Without VPS/PDC)



	CANAL	W/O CANAL
R6P07	200	100
R6P10	220	JUMPER

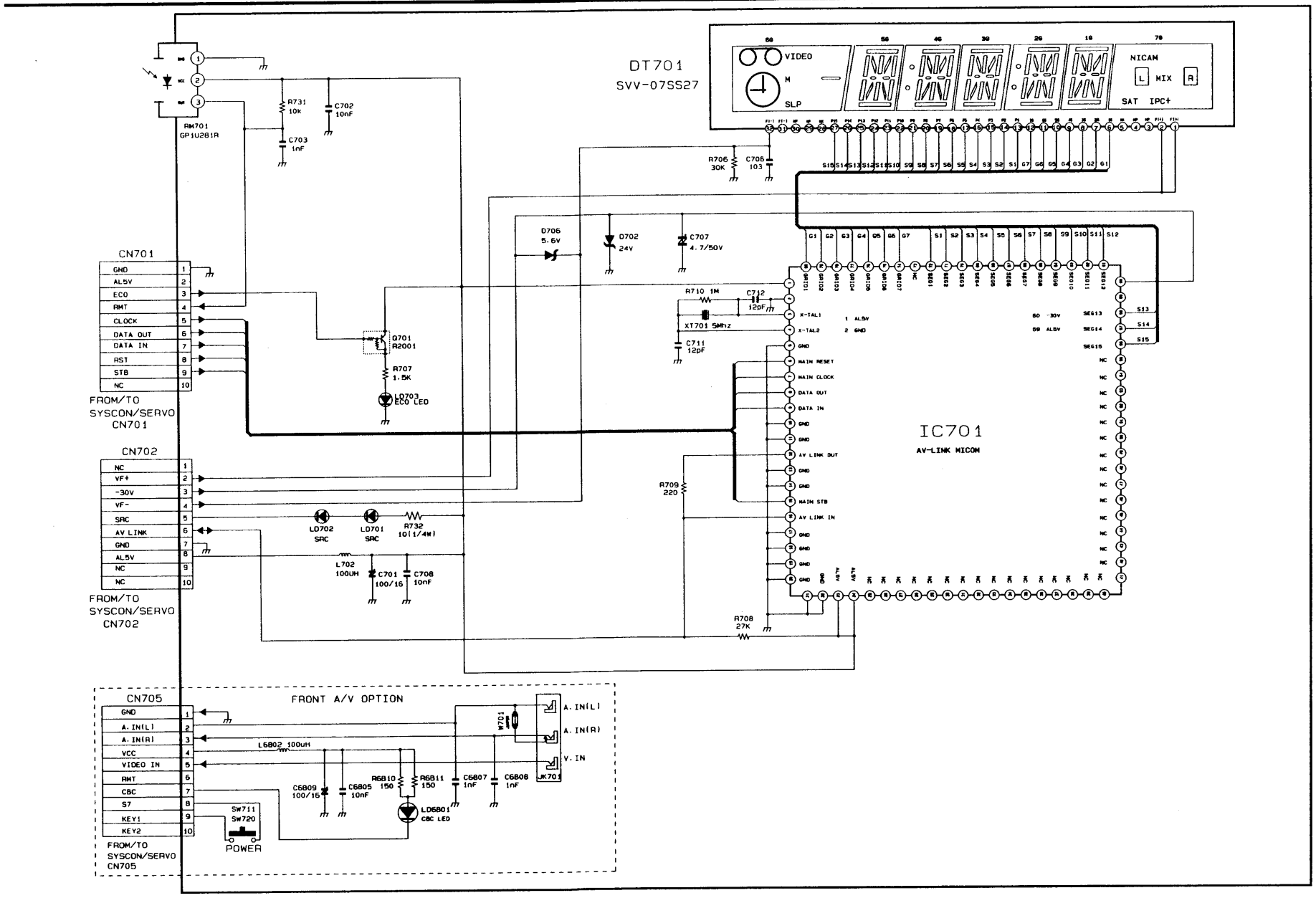
10-13 OSD (Without VPS/PDC)



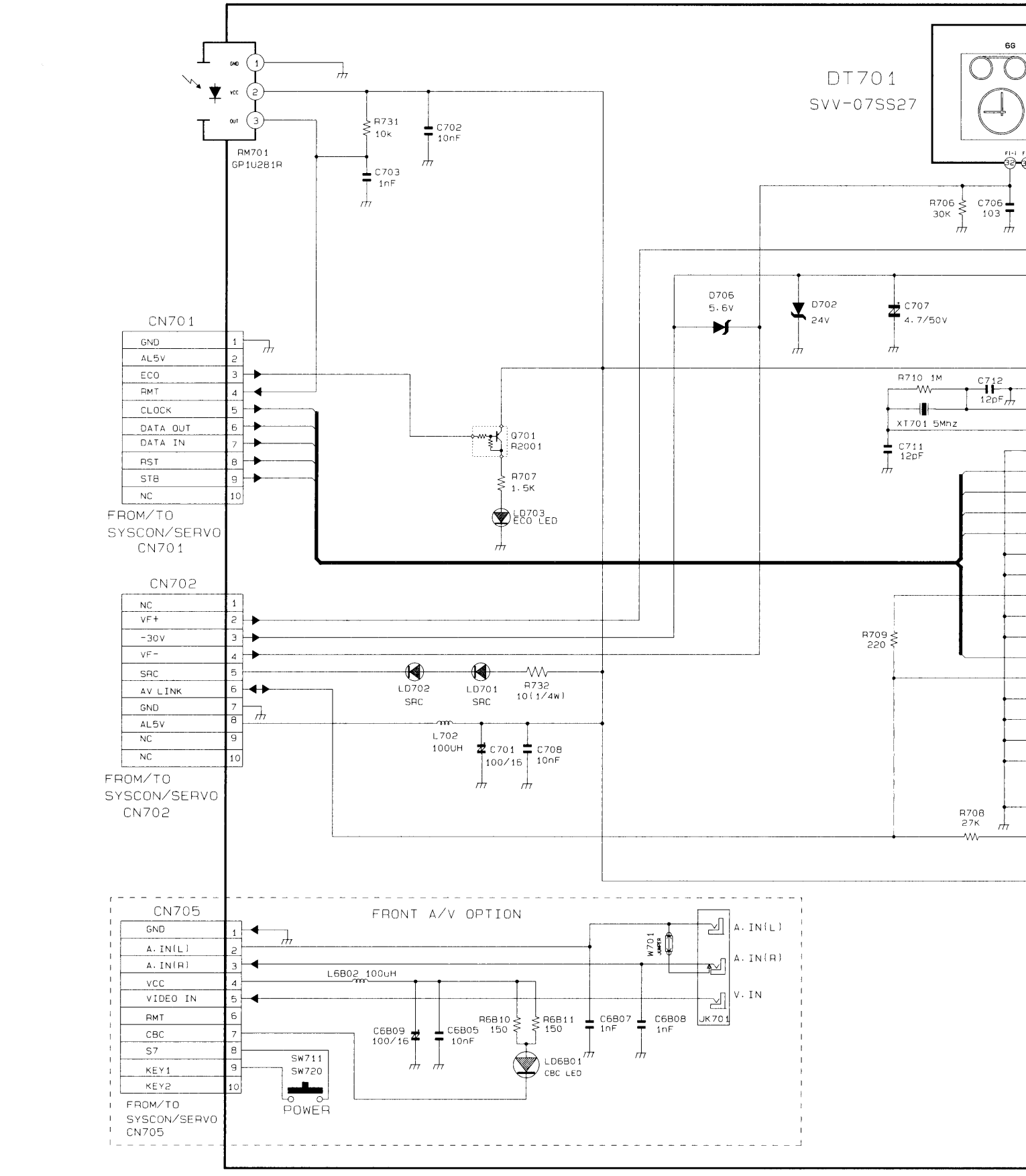


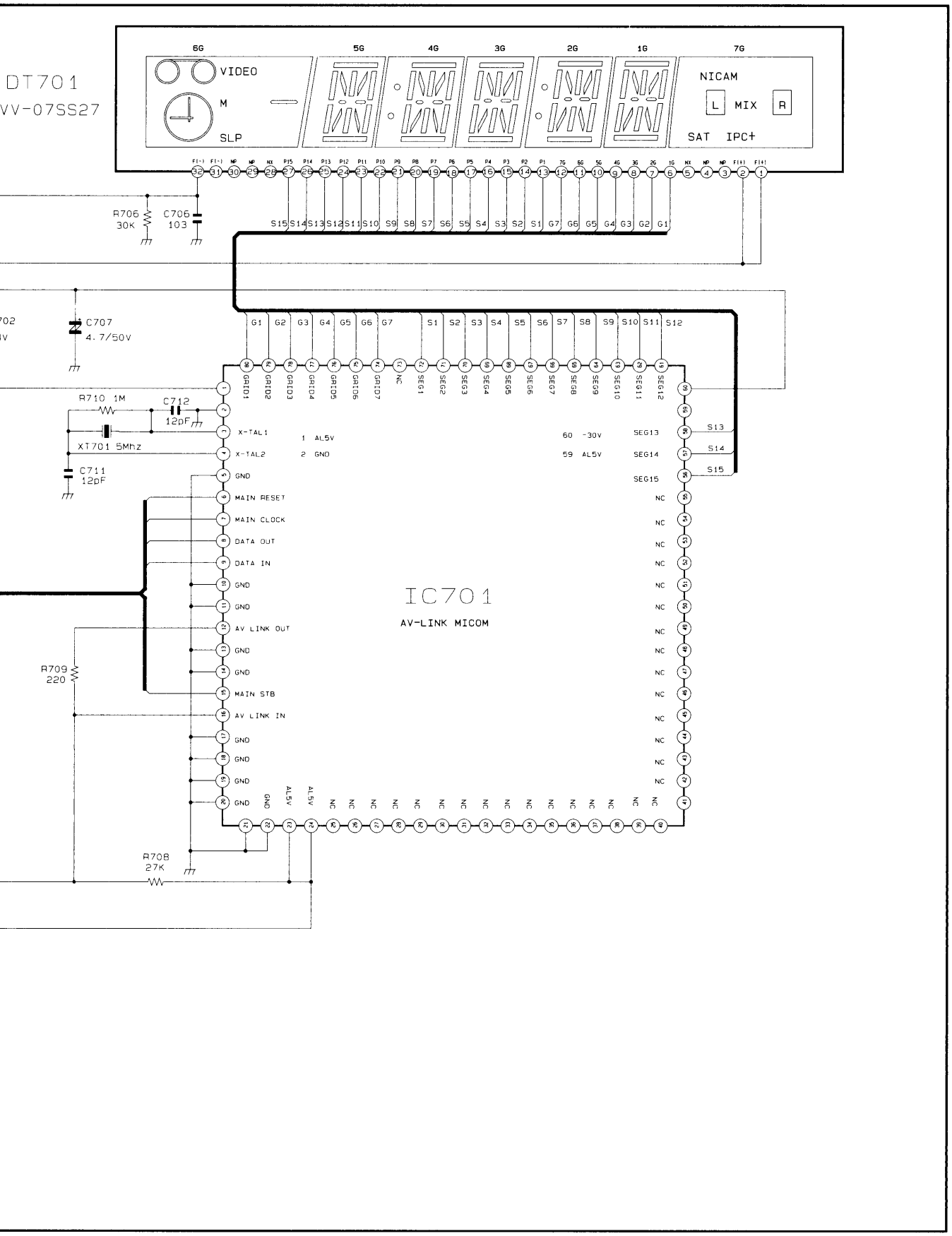
	CANAL	W/O CANAL
R6P07	200	100
R6P10	220	JUMPER

10-14 VFD (With AV-Link)

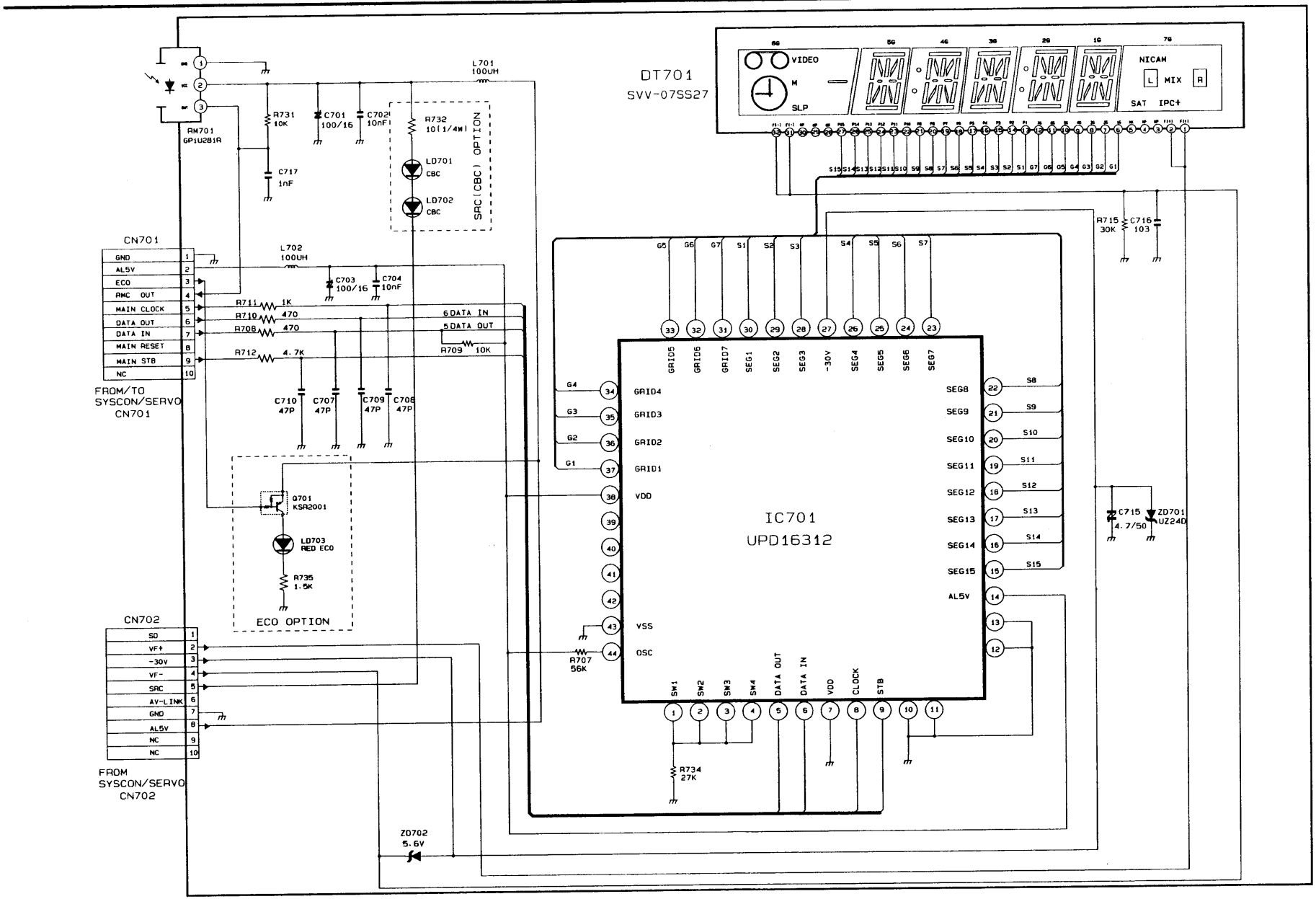


10-14 VFD (With AV-Link)

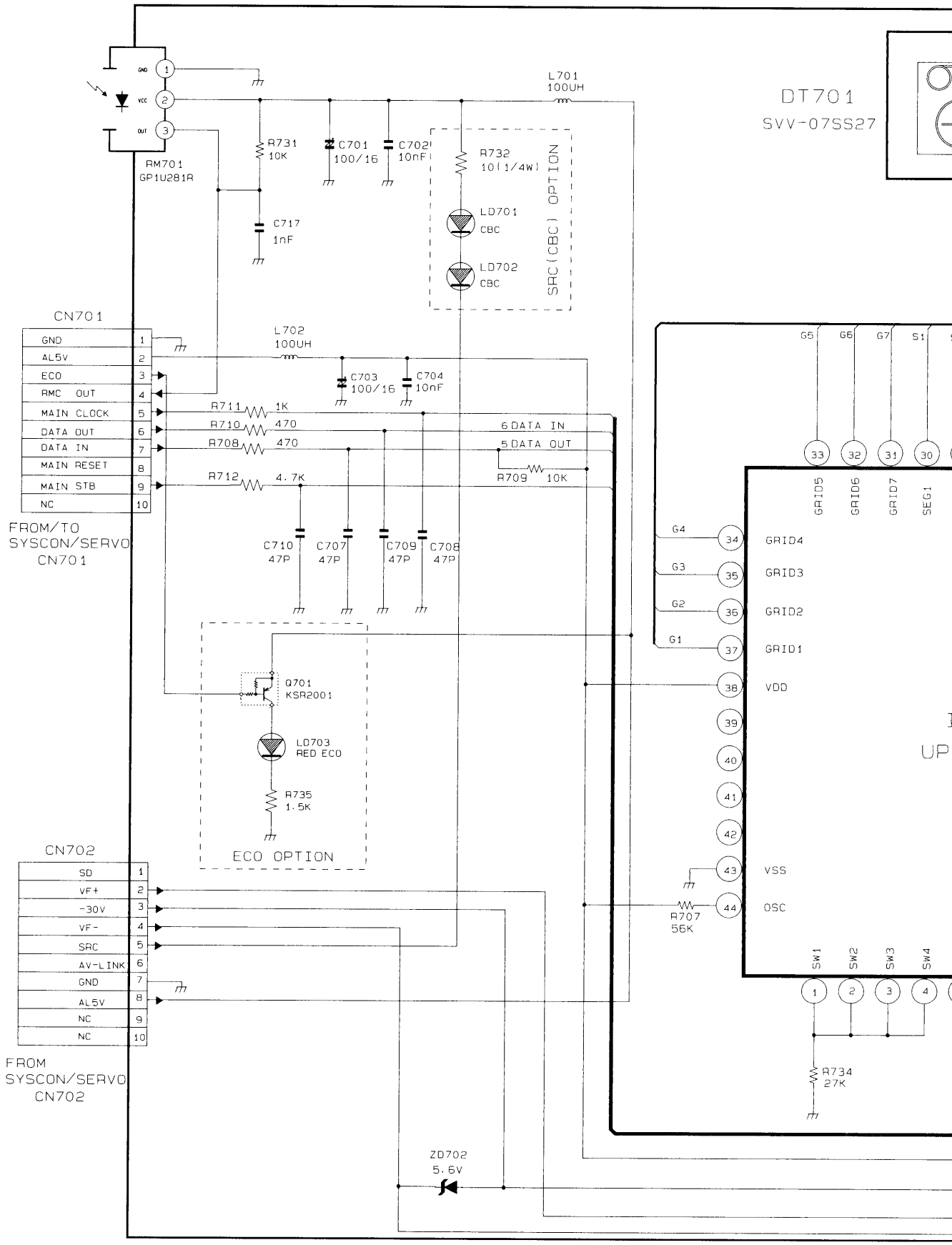


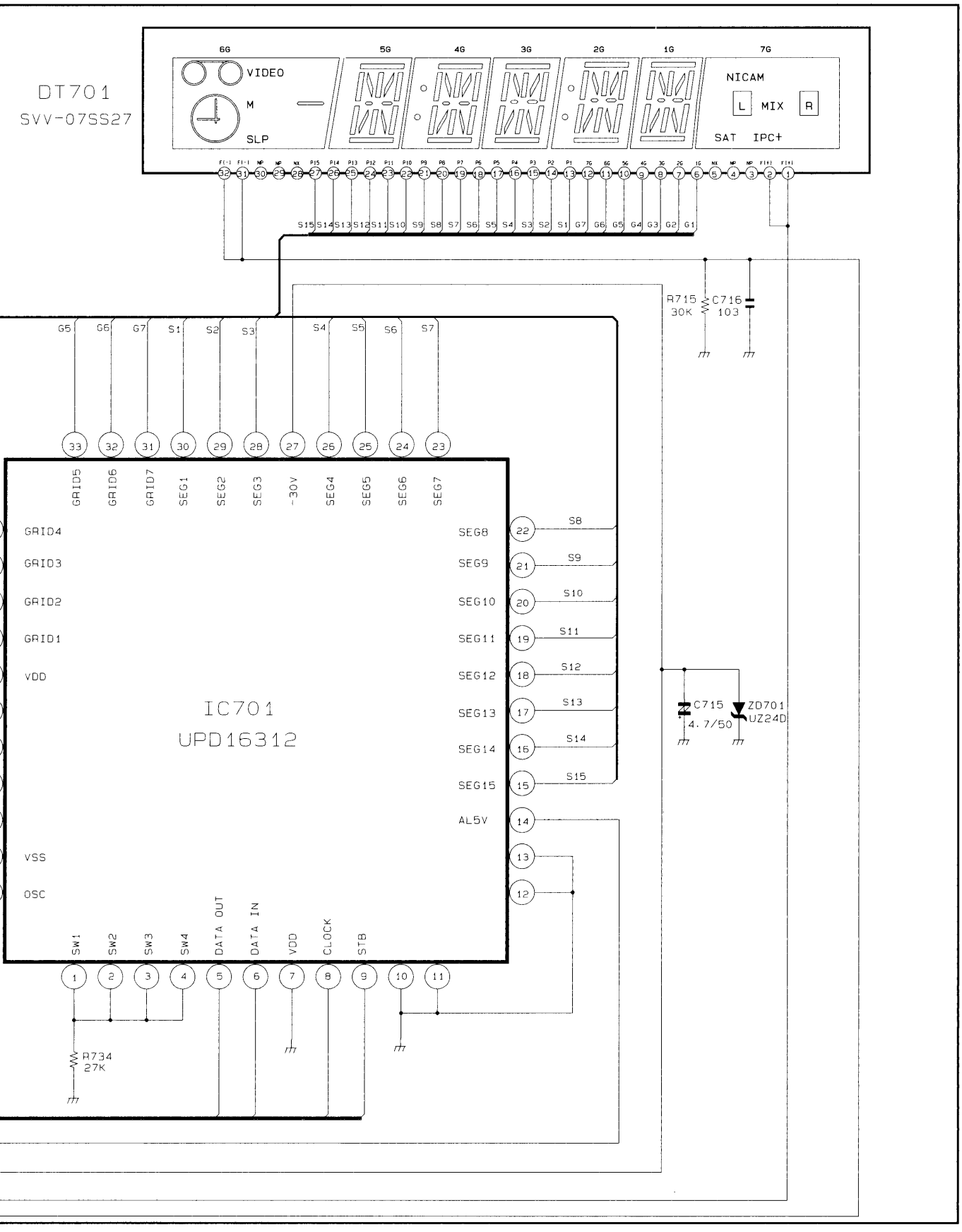

DT701
VV-07SS27
5G
VIDEO
M
SLP
5G
4G
3G
2G
1G
7G
NICAM
L
MIX
R
SAT
IPC+
R706
30K
C706
103
C707
4.7/50V
R710 1M
C712
12pF
XT701 5Mhz
C711
12pF
R709
220
R708
27K
IC701
AV-LINK MICOM
X-TAL1
X-TAL2
GND
MAIN RESET
MAIN CLOCK
DATA OUT
DATA IN
AV LINK OUT
MAIN STB
AV LINK IN
1 AL5V
2 GND
60 -30V
59 AL5V
SEG13
SEG14
SEG15
S13
S14
S15
NC

10-15 VFD (Without AV-Link)

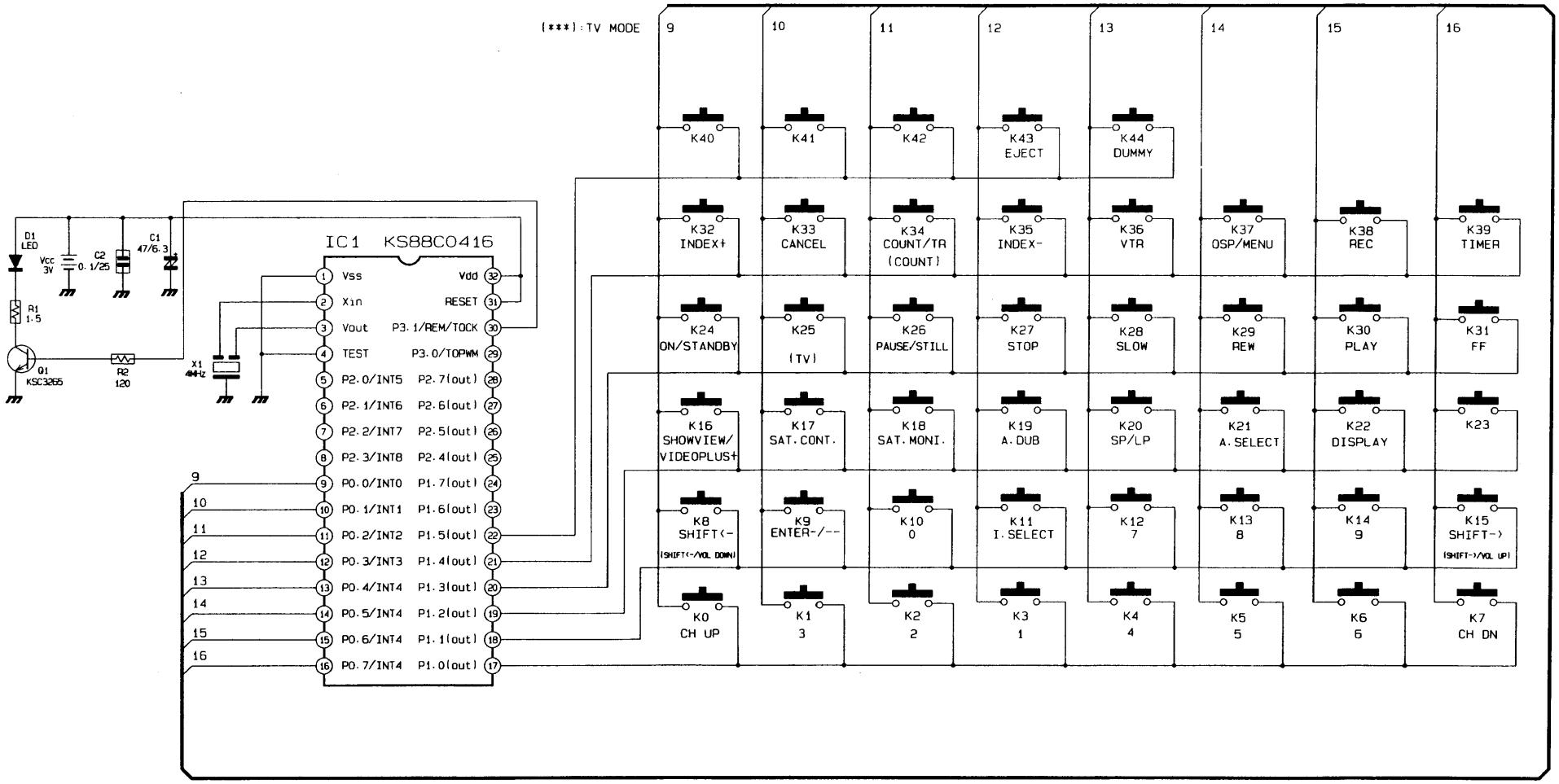


10-15 VFD (Without AV-Link)

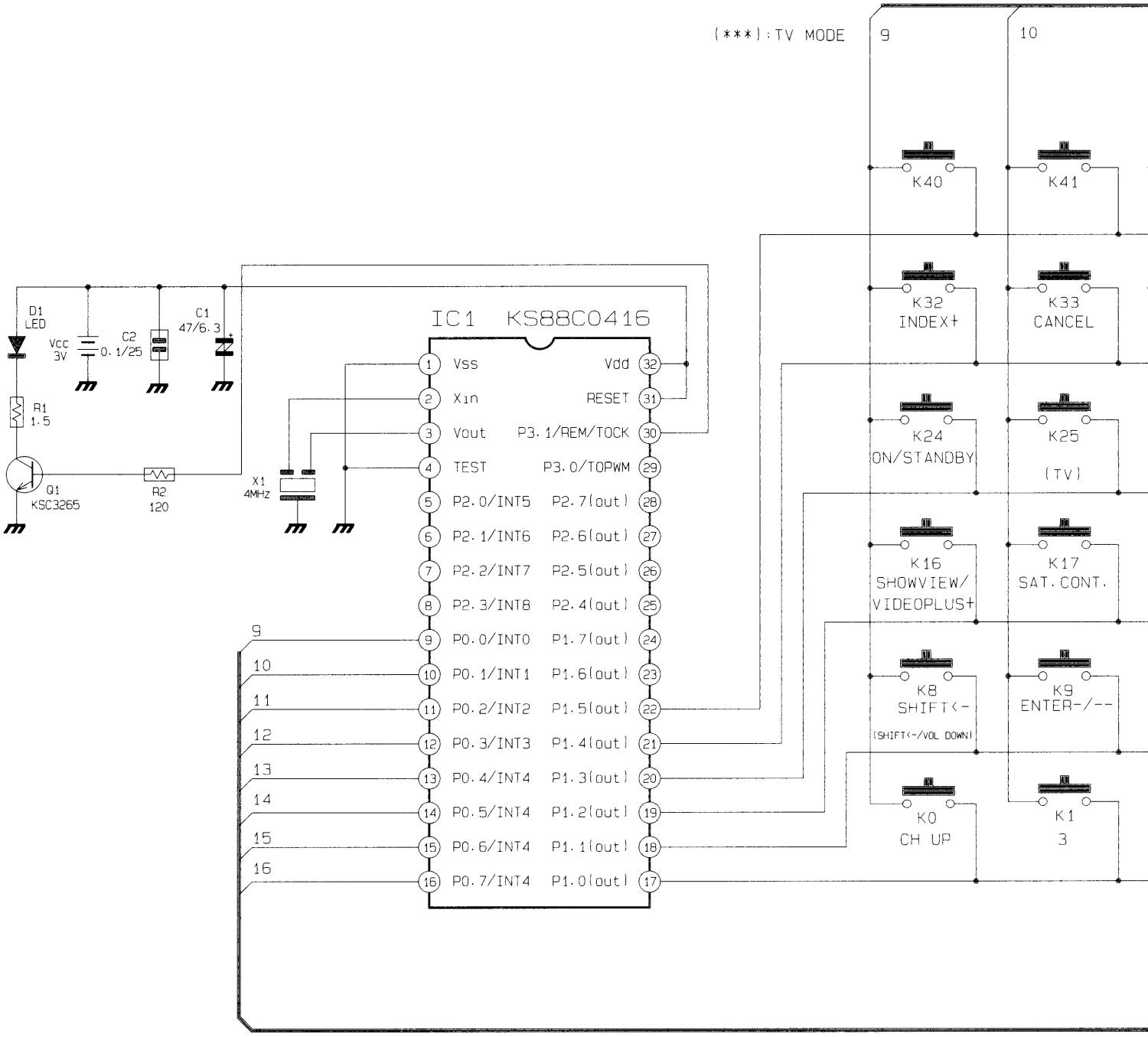


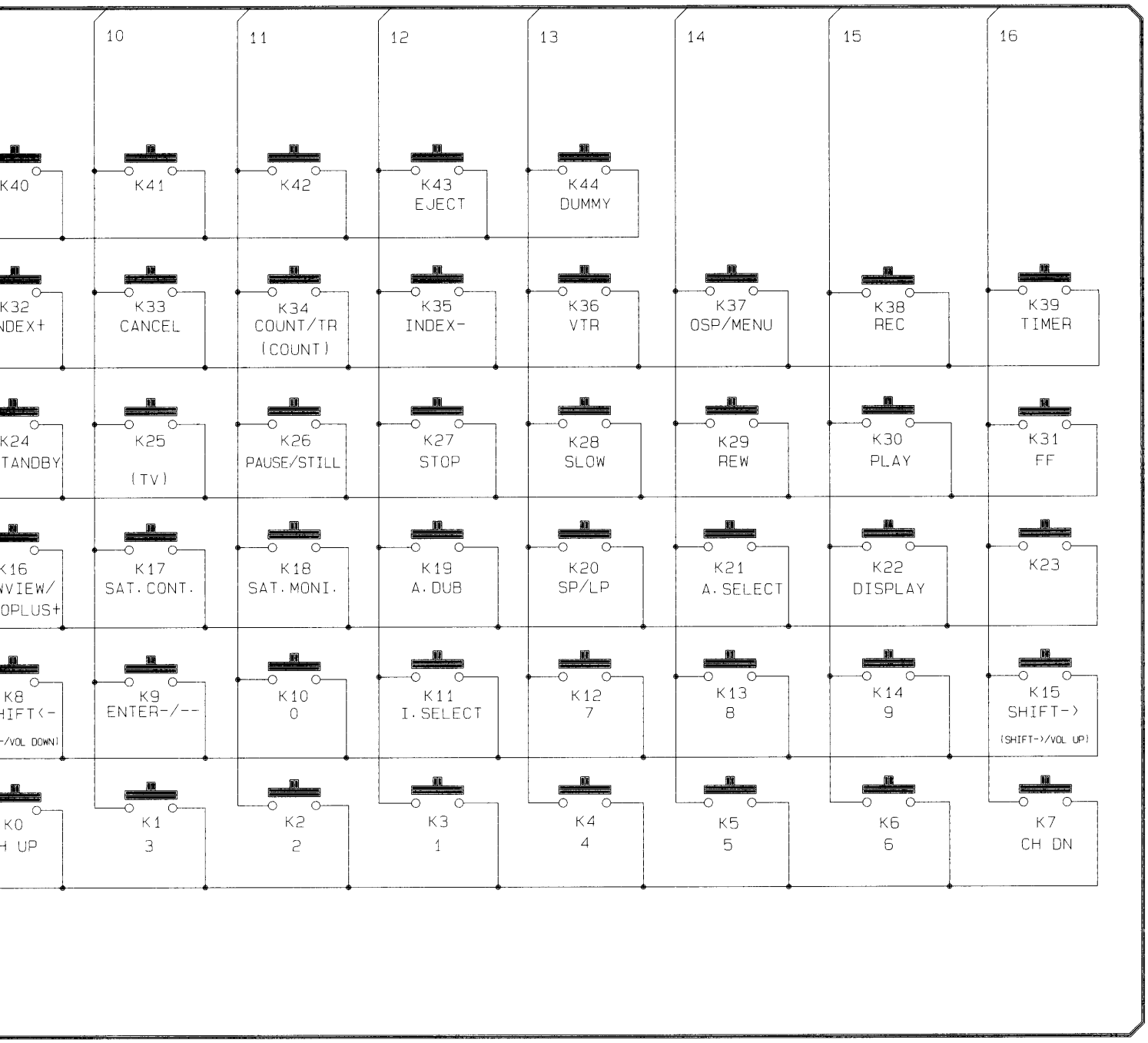

DT701
SVV-07SS27
6G
5G
4G
3G
2G
1G
7G
VIDEO
M
SLP
NICAM
L
MIX
R
SAT
IPC+
S15 S14 S13 S12 S11 S10 S9 S8 S7 S6 S5 S4 S3 S2 S1 G7 G6 G5 G4 G3 G2 G1
R715
30K
C716
103
G5 G6 G7 S1 S2 S3 S4 S5 S6 S7
33 32 31 30 29 28 27 26 25 24 23
GRID5 GRID6 GRID7 SEG1 SEG2 SEG3 -30V SEG4 SEG5 SEG6 SEG7
GRID4
GRID3
GRID2
GRID1
VDD
IC701
UPD16312
SEG8 22 S8
SEG9 21 S9
SEG10 20 S10
SEG11 19 S11
SEG12 18 S12
SEG13 17 S13
SEG14 16 S14
SEG15 15 S15
AL5V 14
13
12
VSS
OSC
C715
4.7/50
ZD701
UZ24D
SW1 SW2 SW3 SW4 DATA OUT DATA IN VDD CLOCK STB
1 2 3 4 5 6 7 8 9 10 11
R734
27K

10-16 Remote-Control (Multi)

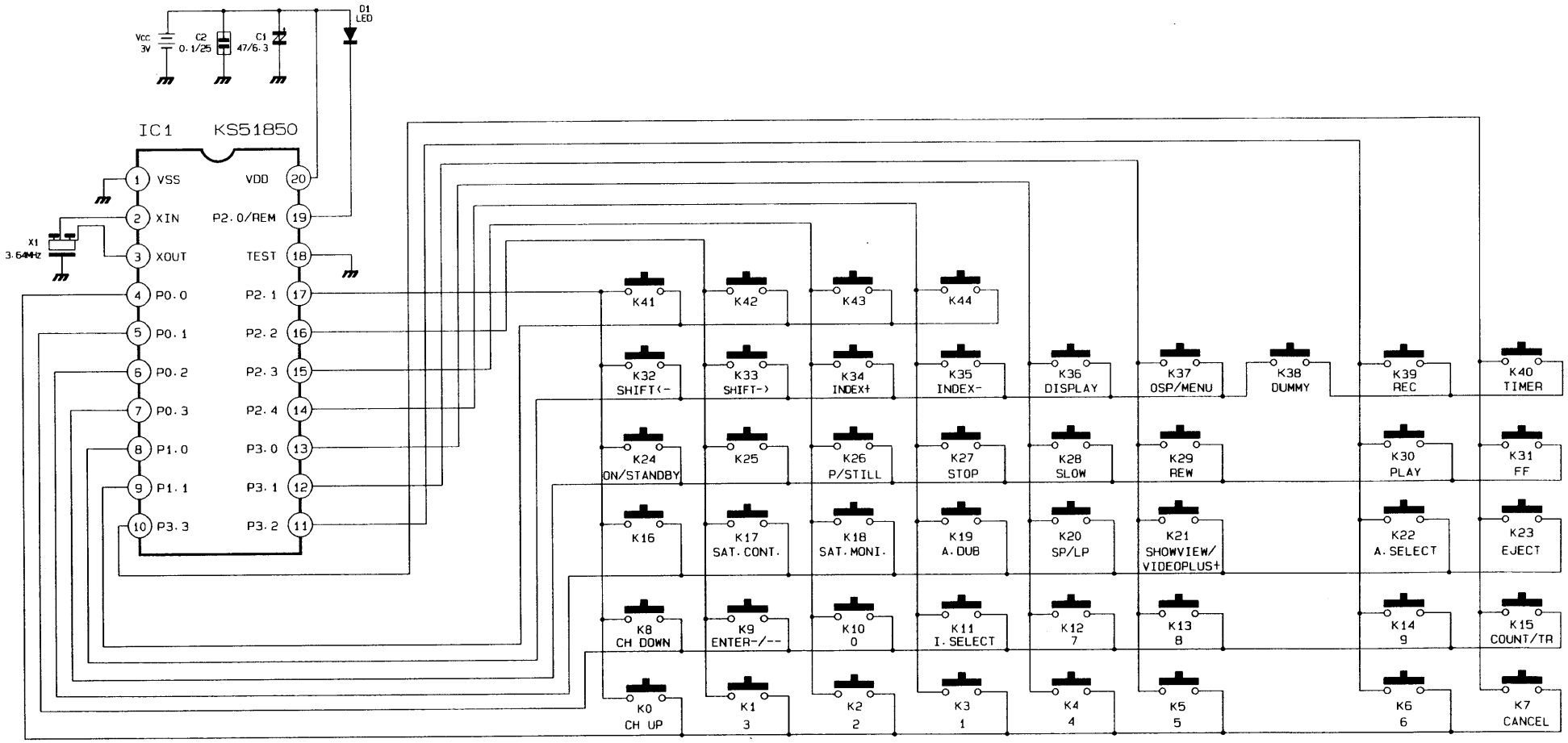


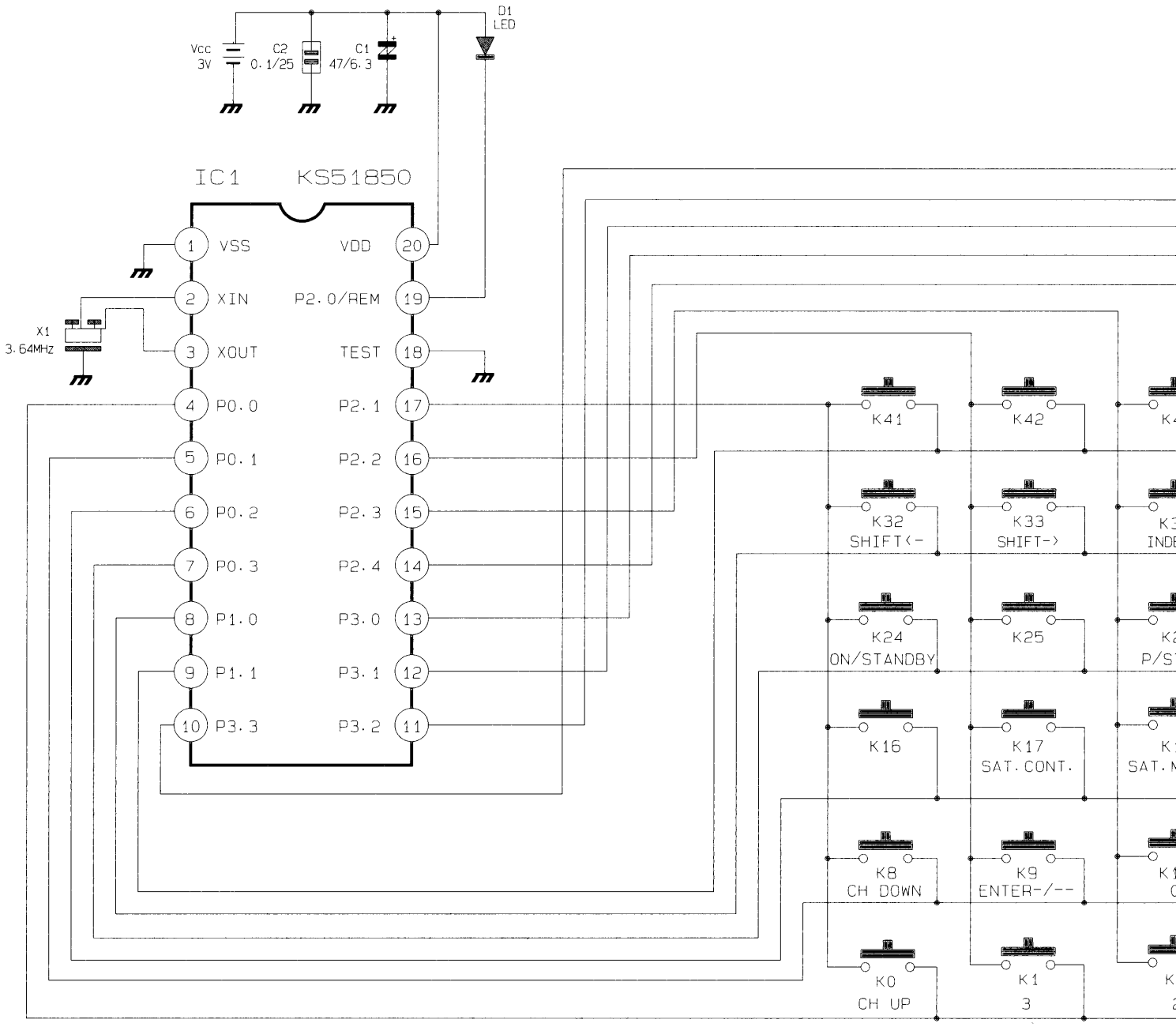
10-16 Remote-Control (Multi)

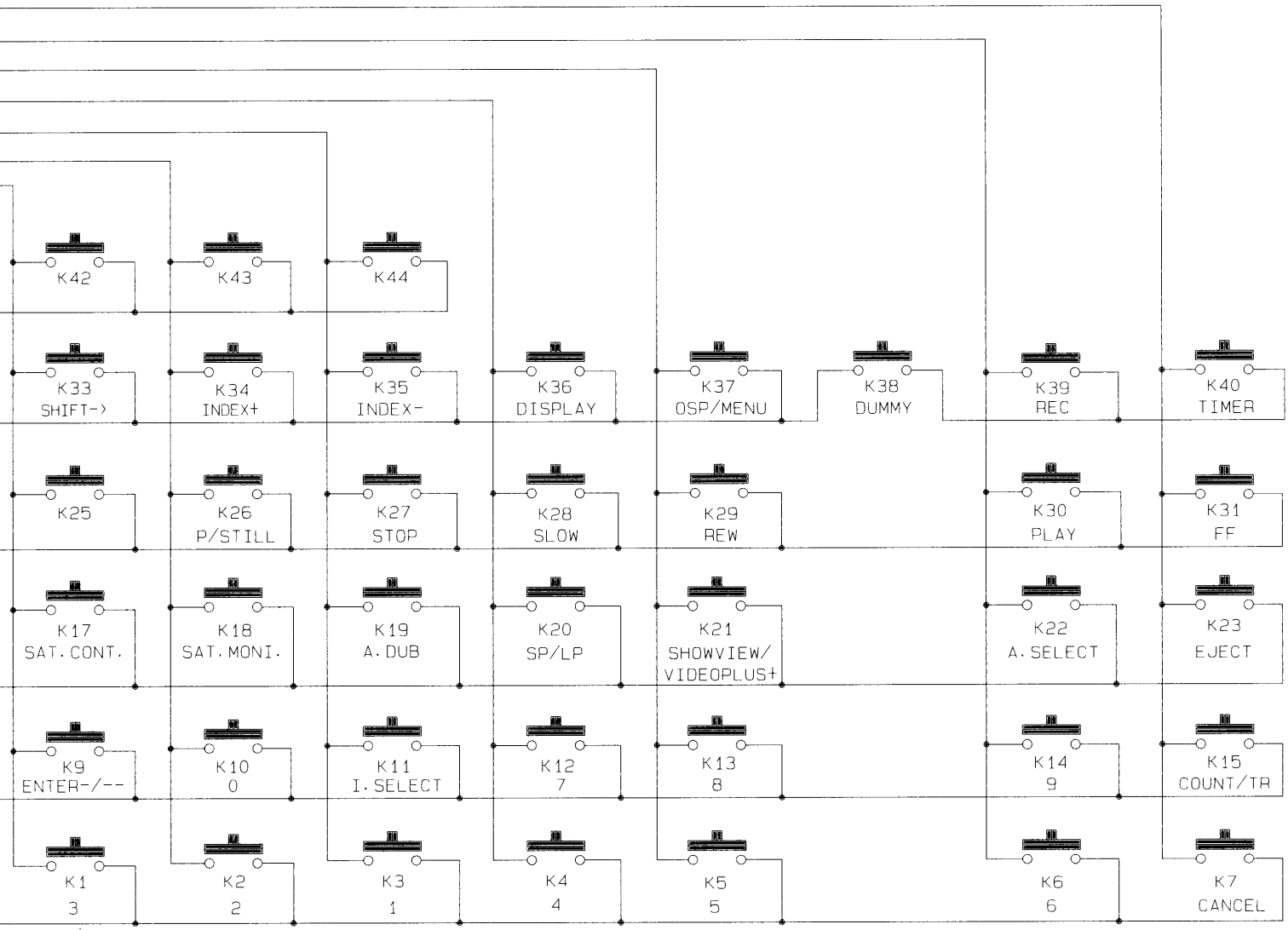



10
11
12
13
14
15
16
K40
K41
K42
K43
EJECT
K44
DUMMY
K32
NDEX+
K33
CANCEL
K34
COUNT/TR
(COUNT)
K35
INDEX-
K36
VTR
K37
OSP/MENU
K38
REC
K39
TIMER
K24
TANDBY
K25
(TV)
K26
PAUSE/STILL
K27
STOP
K28
SLOW
K29
REW
K30
PLAY
K31
FF
K16
NVIEW/
OPLUS+
K17
SAT. CONT.
K18
SAT. MONI.
K19
A. DUB
K20
SP/LP
K21
A. SELECT
K22
DISPLAY
K23
K8
HIFT<-
-/VOL DOWN)
K9
ENTER-/--
K10
0
K11
I. SELECT
K12
7
K13
8
K14
9
K15
SHIFT->
(SHIFT->/VOL UP)
K0
H UP
K1
3
K2
2
K3
1
K4
4
K5
5
K6
6
K7
CH DN

10-17 Remote-Control (VCR Only)




D1
LED
Vcc
3V
C2
0.1/25
C1
47/6.3
IC1 KS51850
1 VSS
2 XIN
3 XOUT
4 P0.0
5 P0.1
6 P0.2
7 P0.3
8 P1.0
9 P1.1
10 P3.3
20 VDD
19 P2.0/REM
18 TEST
17 P2.1
16 P2.2
15 P2.3
14 P2.4
13 P3.0
12 P3.1
11 P3.2
X1
3.64MHz
K41
K42
K32
SHIFT<-
K33
SHIFT->
K24
ON/STANDBY
K25
K16
K17
SAT. CONT.
K8
CH DOWN
K9
ENTER-/--
K0
CH UP
K1
3


K42
K43
K44
K33
SHIFT->
K34
INDEX+
K35
INDEX-
K36
DISPLAY
K37
OSP/MENU
K38
DUMMY
K39
REC
K40
TIMER
K25
K26
P/STILL
K27
STOP
K28
SLOW
K29
REW
K30
PLAY
K31
FF
K17
SAT. CONT.
K18
SAT. MONI.
K19
A. DUB
K20
SP/LP
K21
SHOWVIEW/
VIDEOPLUS+
K22
A. SELECT
K23
EJECT
K9
ENTER-/--
K10
0
K11
I. SELECT
K12
7
K13
8
K14
9
K15
COUNT/TR
K1
3
K2
2
K3
1
K4
4
K5
5
K6
6
K7
CANCEL